XR-1853MK2

SERVICE MANUAL

East European Model

Model Name Using Similar Mechanism	XR-1853
Tape Transport Mechanism Type	MG-36SHJ-32

SPECIFICATIONS

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.2 % (WRMS)
Frequency response	50 – 15,000 Hz
Signal-to- noise ratio	50 dB

Tuner section

FM

Tuning range	FM1: 65 – 74 MHz FM2: 87.5 – 108 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	12 dBf
Selectivity	65 dB at 400 kHz
Signal-to-noise ratio	55 dB (stereo), 60 dB (mono)
Harmonic distortion at 1 kHz	1.5 % (stereo), 1.0 % (mono)
Separation	25 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	9 dB

MW/LW

Tuning range	MW: 522 – 1,611 kHz LW:153 - 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	450 kHz
Sensitivity	MW: 35 µV LW: 40 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	20 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead
Tone controls	12 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 58 × 170 mm (w/h/d) not incl. projecting parts and controls
Mounting dimension	Approx. 182 × 53 × 165 mm (w/h/d) not incl. projecting parts and controls
Mass	Approx. 1.5 kg
Supplied accessories	Mounting hardware (1 set)

Design and specifications are subject to change without notice.

FM/MW/LW CASSETTE CAR STEREO

SONY®

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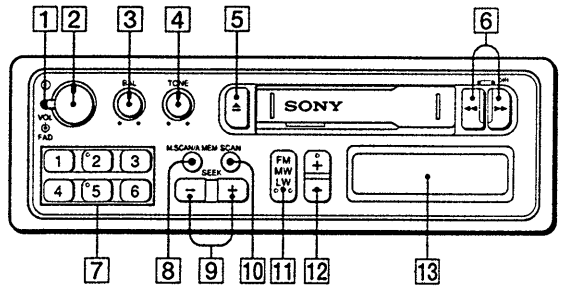
NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

This section is extracted from instruction manual.

EN

Button Locations



Refer to the pages in ● for details.

1 **FAD (fader) control**
Turn the outer knob to adjust the balance between front and rear speakers.

2 **VOL (on/off, volume) control**
Turn the inner knob to turn the unit on or off and to adjust the volume.

3 **BAL (balance) control**
Turn the knob to adjust the balance between right and left speakers.

4 **TONE control**
Turn the knob to the left for less treble.

5 **⏏ (eject) button ❹**

6 **◀◀ /▶▶ (fast-winding)/DIR (tape transport direction change) ❹**

7 **Preset number buttons ❻**

8 **M.SCAN/A.MEM button ❻❼**

9 **SEEK (automatic tuning) button ❺**

10 **SCAN button ❺**

11 **FM/MW/LW (band select) button ❺❻❼**

12 **+/– button ❺**

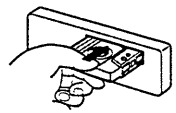
13 **Display window**

EN

Listening to Tape Playback

1 Turn on the unit by rotating the VOL control.

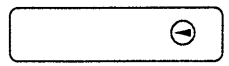
2 After inserting the cassette, playback will start automatically.



To change the tape direction,
press both the ◀◀ and the ▶▶ button at the same time.

Indication of Tape Transport Direction

The side facing up is being played.



The side facing down is being played.

Tape playback automatically changes direction at the end of the tape.

Note
Before turning off the unit, eject the tape to avoid tape damage.

Ejecting the Cassette

Press the ⏏ button to stop playback and eject the cassette.

Fast-winding the Tape

Direction indicator	To advance	To rewind
►		
◄		

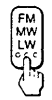
To resume playback, press the other fast-winding button until the locked button is released.

Tuning in a Station

Searching for the Stations Automatically
— Automatic Tuning

1 Turn on the unit by rotating the VOL control.

2 Select the desired band.



FM1 → FM2 → MW → LW → FM1

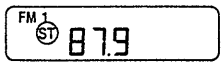
3 Press either side of the SEEK button to search for the station (automatic tuning).

For lower frequencies

For higher frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

When an FM stereo program with a sufficient signal strength is tuned in,



the "ST" indication will appear.

Tuning in by Adjusting the Frequency — Manual Tuning

1 Select the desired band.

2 Press and hold either side of the + / − button.
Release the button when the desired station is received.

For lower frequencies

For higher frequencies

PREVENTING ACCIDENTS!
When tuning in during driving, use the automatic tuning or the preset number buttons instead of the manual tuning.

Scanning for the Stations
— Scan Function

1 Select the desired band.

2 Press the SCAN button.

The stations with the strongest signals will be scanned for five seconds each in order. Press the button again when the desired station is received.

Memorizing Stations

Memorizing Stations Automatically
— Automatic Memory Function

This function selects from the currently received band six stations and memorizes them in order of their frequencies. If six strong stations cannot be found, it will search the band again looking for farther stations.

1 Select the desired band.

2 Use any tuning method to tune to a frequency slightly below that of the first station you want to memorize.

3 Press the M.SCAN/A.MEM button for more than two seconds.

Note
If a station you want to store has a weak signal or interference, it might not automatically be memorized.

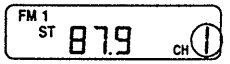
Memorizing Only the Desired Stations

1 Select the desired band.

2 Tune in the station which you wish to store on the preset number button.

3 Keep the desired preset number button (1 to 6) pressed for about two seconds until the volume briefly mutes.

The number of the pressed preset number button now appears on the display window.



Up to 6 stations on each band (FM1, FM2, MW and LW) can be stored on the preset number buttons in order of your choice. Therefore, 12 stations can be memorized on FM. If you try to store another station on the same preset number button, the previously stored station will be erased.

Receiving the Memorized Stations

1 Select the desired band.

2 Press momentarily the preset number button on which the desired station is stored.

Note
If you press the preset number button for more than two seconds, the currently received station will be memorized. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.

Checking What is Being Broadcast on the Preset Stations — Memory Scan Function

1 Select the desired band.

2 Press the M.SCAN/A.MEM button momentarily.

The memorized stations will be scanned for five seconds each in order.
(When the broadcast signal of a memorized station is too weak, it cannot be received.)

Note

Make sure that you press the M.SCAN/A.MEM button momentarily. If you press it for more than two seconds, the button will function as the A.MEM (automatic memory) button, and the memories of the currently activated preset number button and of the succeeding preset number buttons will be altered.

Maintenance

Fuse Replacement

When replacing the fuse, be sure to use one with the correct amperage which is stated on the fuse case. Never use a fuse whose amperage rating exceeds the one supplied to the unit, as this could cause a malfunction of the unit.

Warning

Use a fuse with the specified amperage.
Use of a fuse with higher amperage may cause serious damage.

Cleaning the Head and the Tape Path

Prolonged use may contaminate the tape head and the tape path. Contamination causes sound drop-outs during playback.
Clean the tape head and the tape path every two weeks to enjoy optimum hi-fi stereo sound. Use a commercially available cleaning cassette.

Connections

Caution

- This unit is designed for negative ground 12V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **red** power input lead only after all other leads are connected. Be sure to connect it to the positive 12V power terminal which is energized when the ignition key is turned to the accessory position.
- **Run all ground wires to a common ground point.**

Podłączenia

Uwaga

- Urządzenie to przeznaczone jest do pracy przy uziemieniu ujemnym 12V DC.
- Przed podłączeniem należy odłączyć uziemienie akumulatora samochodowego, aby zapobiec powstaniu zwarcia.
- Przewód **czerwony** podłączyć dopiero po podłączeniu wszystkich innych przewodów. Podłącza się go wyłącznie do zacisku o napięciu dodatnim 12V, który zasilany jest po przekręceniu kluczyka w stacyjce do pierwszego położenia (zasilanie wyposażenia).
- **Wszystkie przewody uziemiające poprowadzić do wspólnego miejsca uziemienia.**

Свързване

Внимание

- Уредът е конструиран за включване само към източник на прав ток с 12 волта напрежение и заземяване към отрицателната клема на акумулаторната батерия.
- Преди да направите свързванията, откачете отрицателната клема на акумулатора, за да избегнете късо съединение.
- **Червеният** захранващ проводник свържете след като вече сте свързали всички останали. Убедете се, че той е свързан към положителната клема с напрежение от 12 волта, която се захранва с ток, когато ключа за запалване е в положение за включване на спомагателните уреди.
- **Свържете всички заземяващи проводници към една обща точка.**

Csatlakozások

Figyelem

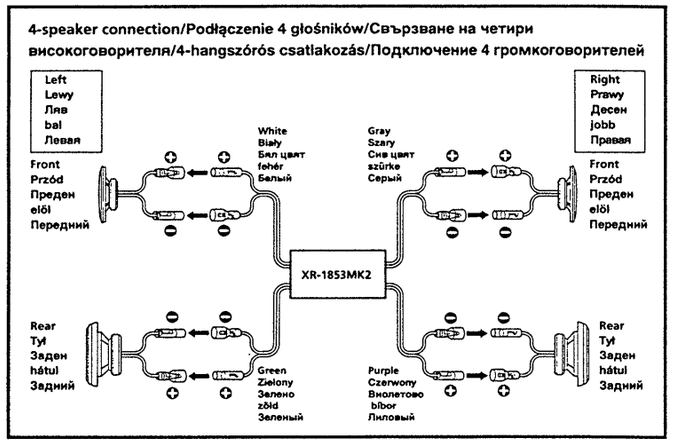
- Ez a készülék csak 12 V-os negatív földelésű, egyenáramú akkumulátorról üzemeltethető.
- Egy esetleges rövidzárlat elkerülése érdekében vegye le az autó akkumulátorának csatlakozóját a készülék csatlakoztatása előtt.
- A **piros** színű tápvezetéket csak az összes többi vezeték bekötése után csatlakoztassa. A piros vezetéket ahhoz a +12V-os csatlakozási ponthoz csatlakoztassa, mely áramot kap, ha az indítókulcs félig van elforditva.
- **Az összes földelővezetéket közös földelőponthoz csatlakoztassa.**

Подключения

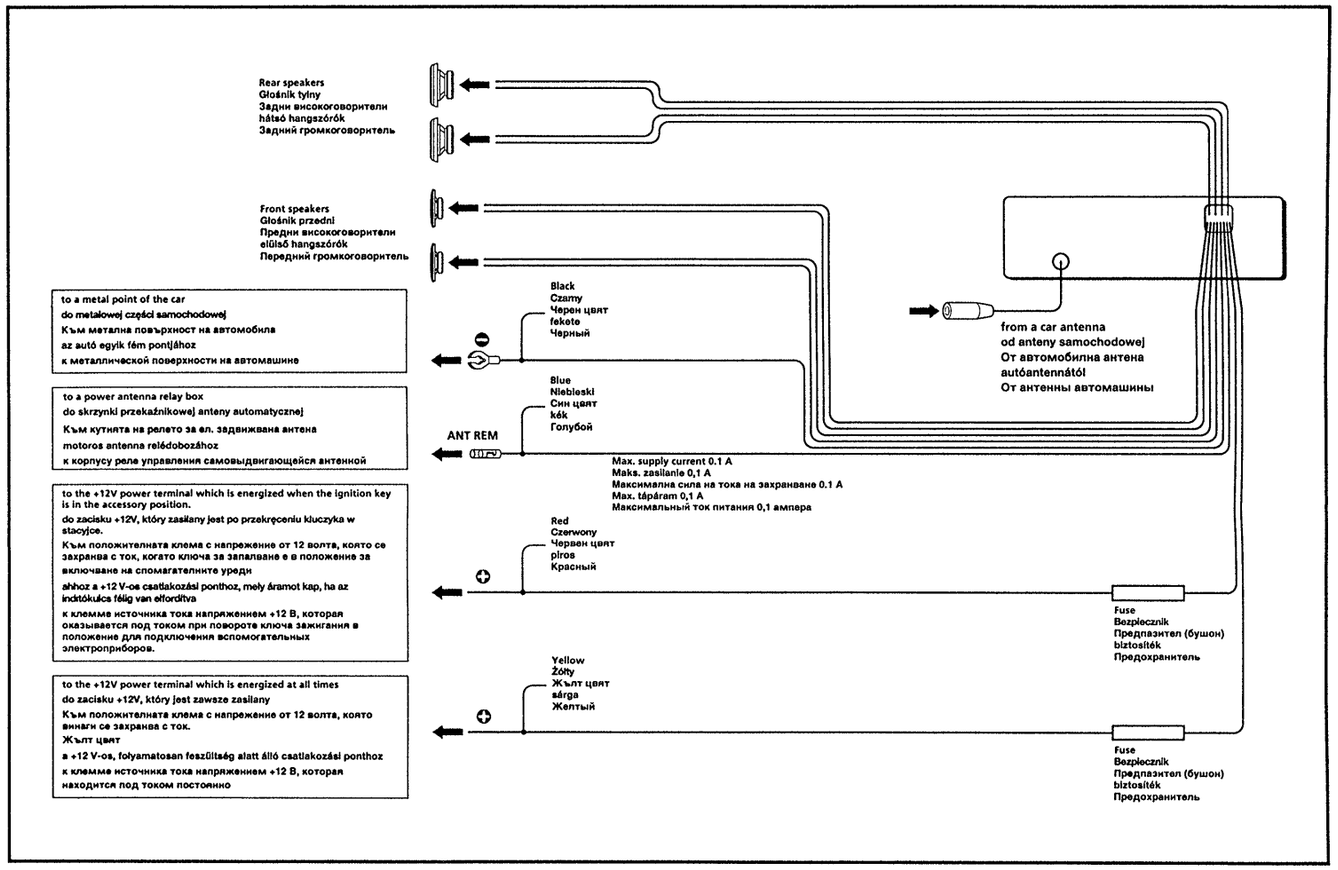
Предостережение

- Этот аппарат предназначен для эксплуатации только при подключении к отрицательной клемме источника постоян тока напряжением 12 В.
- До начала установки во избежание короткого замыкания отсоедините заземление аккумуляторной батареи автомашины.
- Подключать электрошнур питания **красного** цвета только после подключения всех прочих проводов. Убедитесь в то что он подключен к положительной клемме источника ток напряжением +12 В, которая оказывается под током при повороте ключа зажигания в положение для подключения вспомогательных электроприборов.
- **Подключите все провода заземления к одному общег контакту для заземления.**

Speaker Connections/Podłączenie głośników/Свързване на високоговорителите/Hangszóró csatlakozások/Подключение громкоговорителей



Connection Diagram/Schemat połączeń/Схема за свързване/Csatlakoztatási vázlat/Схема подключения



Notes on speaker connections

- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handing capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Notes no the control leads

- *The power antenna control lead (blue) suppliers 12 V DC when you turn on the unit.*
- *A power antenna without relay box cannot be used with this unit.*

Uwagi odnośnie podłączania głośników

- *Stosować głośniki o impedancji 4 do 8 omów i o odpowiedniej obciążalności mocowej, gdyż w innym przypadku może dojść do ich uszkodzenia.*
- *Nie podłączać przewodów układu głośników do podwozia samochodu, a przyłączy głośnika prawego nie łączyć z przyłączami głośnika lewego.*
- *Nie podłączać głośników równolegle.*
- *Nie podłączać do urządzenia głośników aktywnych (z wbudowanymi wzacniaczami), może to bowiem doprowadzić do ich uszkodzenia. Podłączać wyłącznie głośniki pasywne.*

Uwagi odnośnie przewodów kontrolnych anteny

- *Przewód kontrolny anteny automatycznej (niebieski) dostarcza prąd o napięciu 12 V DC po włączeniu urządzenia.*
- *Do niniejszego urządzenia nie można używać anteny automatycznej bez skrzynki przekaznikowej.*

Забележки по свързването на високоговорителите

- *Използувайте само високоговорители със съпротивление от 4 ома до 8 ома и с подходяща мощност. В противен спучаи, високоговорителите могат да се повредят.*
- *Никога не свързвайте изводите за високоговорителите към шасито на автомобила, както и извода за на дясната тон-колона към този на лявата тон-колона.*
- *Не свързвайте високоговорителите успоредно.*
- *Не свързвайте активни високоговорители (с вградени усилватели) към изводите за високоговорители на апарата. Такова действие може да повреди активните високоговорители. Затова към изводите свързвайте само пасивни високоговорители.*

Забележки по проводниците за управление

- *Проводникът за управление на ел. задвижвана антена подава постоянен ток с напрежение 12 V при включване на уреда.*
- *С този апарат не може да се използува ел. задвижвана антена без кутия с реле.*

Tudnivalók a hangszórók csatlakoztatásáról

- *4-8 ohm impedanciájú, megfelelő teljesítményű hangszórókat használjon, ellenkező esetben ugyanis előfordulhat, hogy a hangszórók károsodnak.*
- *Ne csatlakoztassa a hangszórókat az autó fémszerkezetéhez és ne csatlakoztassa a jobb hangszórót a bal hangszóróhoz.*
- *A hangszórókat semmi esetre se csatlakoztassa párhuzamosan.*
- *Ne csatlakoztasson aktív (beépített erősítővel felszerelt) hangszórókat a készülékhez, ellenkező esetben ugyanis károsodhatnak az aktív hangszórók. A készülékhez csak passzív hangszórókat szabad csatlakoztatni.*

Tudnivalók a vezérlővezetékekről

- *A motoros antenna vezérlővezetéke (kék) 12 V egyenfeszültséget kap, ha bekapcsolja a készüléket.*
- *Ha a készülékhez motoros antennát csatlakoztat, úgy kizárólag relédobozzal felszerelt motoros antennát használjon.*

Примечания к инструкции по подключению громкоговорителей

- *Используйте громкоговорители с электрическим сопротивлением 4-8 Ом, способные принимать достаточно мощные сигналы. В противном случае громкоговорители могут быть повреждены.*
- *Не подключайте контакты системы громкоговорителей к шасси автомашины и не подключайте контакты правого громкоговорителя к контактам левого громкоговорителя.*
- *Не подключайте громкоговорители параллельно.*
- *Не подключайте каких-либо активных громкоговорителей (т.е. со встроенными усилителями) к контактам аппарата для громкоговорителей: это может привести к повреждению активных громкоговорителей. Итак, убедитесь, что Вы подключаете к этим контактам пассивные громкоговорители.*

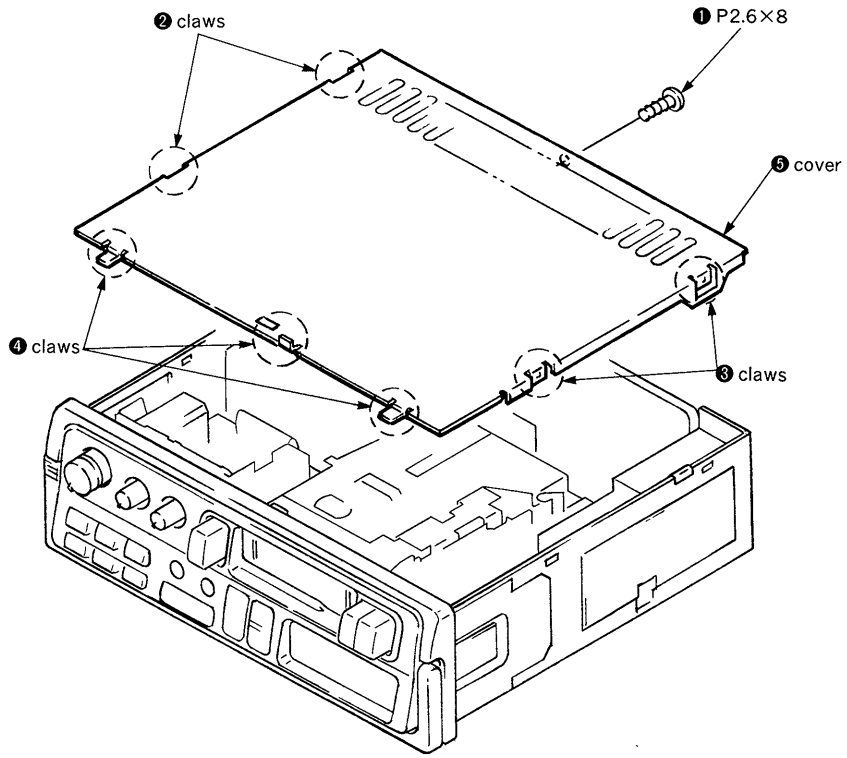
Примечания к проводам управления

- *Провод контроля питания антенны (голубой) подводит 12 В постоянного тока, если Вы включите аппарат.*
- *С данным аппаратом нельзя использовать самовыдвигающиеся антенны без реле управления в отдельном корпусе.*

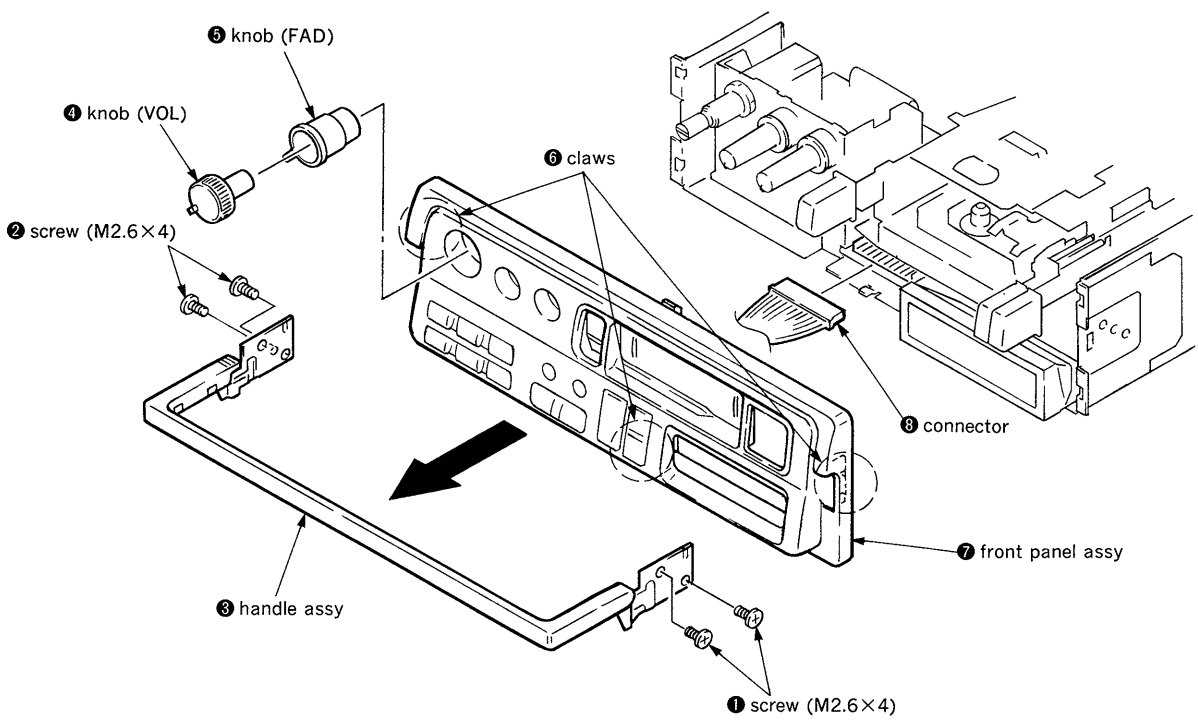
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

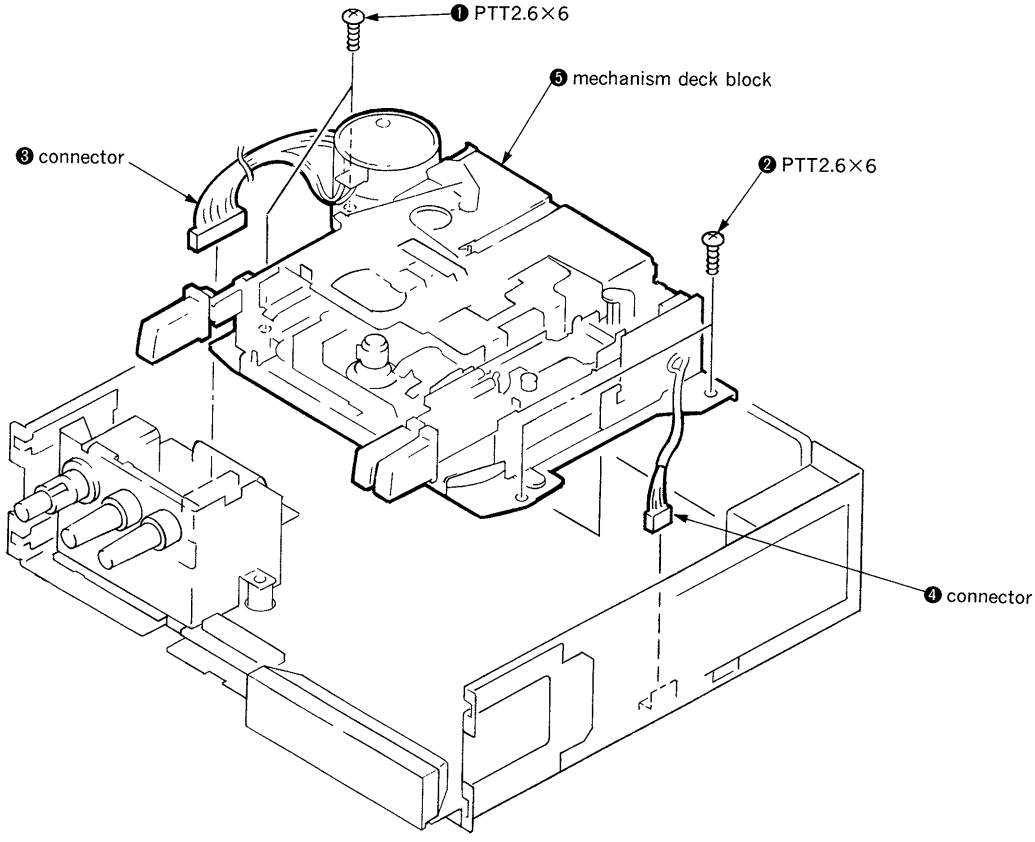
2-1. COVER



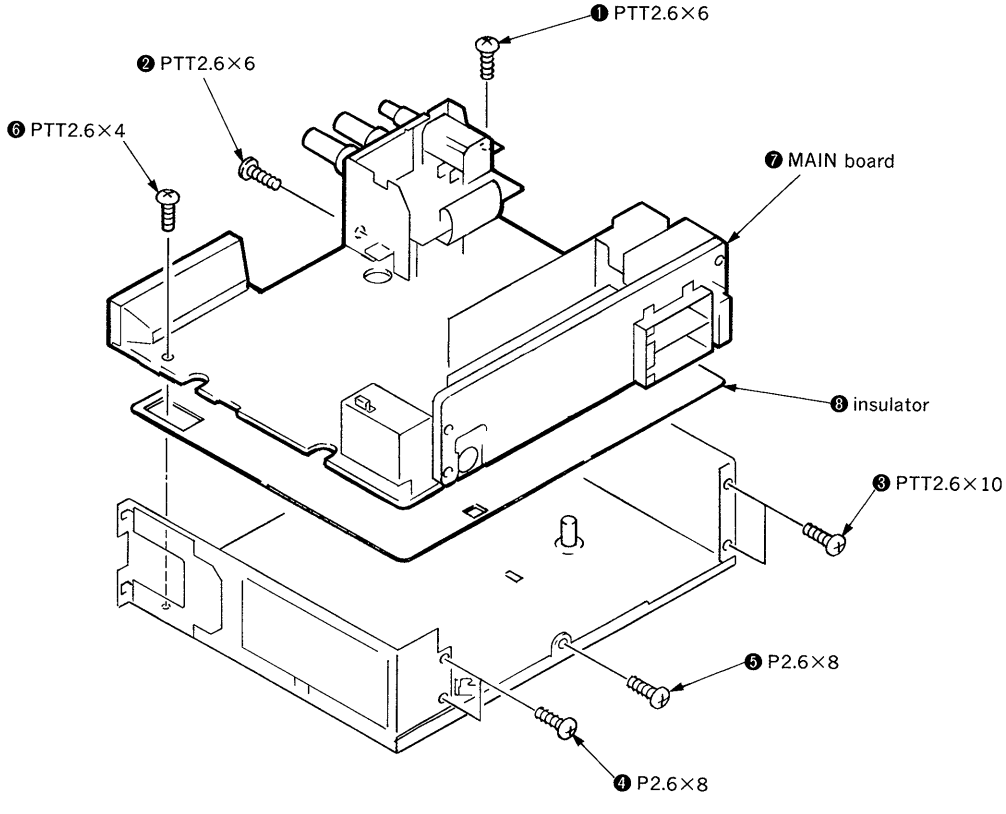
2-2. FRONT PANEL ASSY



2-3. MECHANISM DECK BLOCK



2-4. MAIN BOARD



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before aejustment:
   PB head　　Pinch roller
   Idler　　Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	40—75g•cm (0.56—1.04oz•inch)
FWD Back Tension		1—5g•cm (0.01—0.06oz•inch)
REV	CQ-102RC	40—75g•cm (0.56—1.04oz•inch)
REV Back Tension		1—5g•cm (0.01—0.06oz•inch)
FF, REW	CQ-201B	45—150g•cm (0.63—2.08oz•inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

DECK SECTION | **0dB=0.775V**

1. The adjustments should be performed in the order given in this service manual.
2. The adjustments should be performed for both L-CH and R-CH.

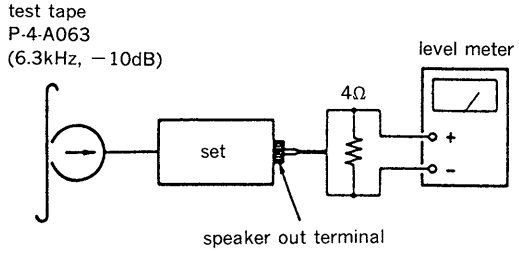
Test Tape

Type	Signal	Used for
P-4-A063	6.3kHz, −10dB	head azimuth adjustment
WS-48A	3kHz, 0dB	tape speed adjustment

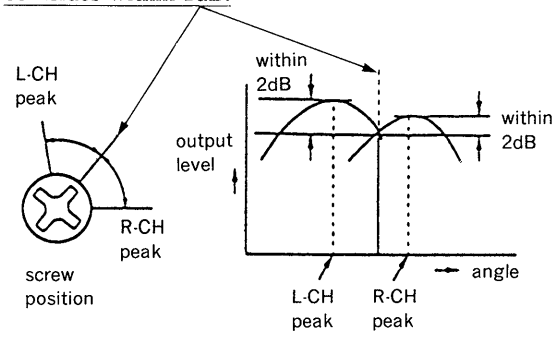
PB Head Azimuth Adjustment

Procedure:

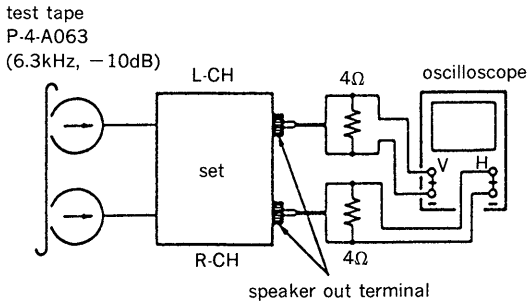
1. Mode: FWD playback

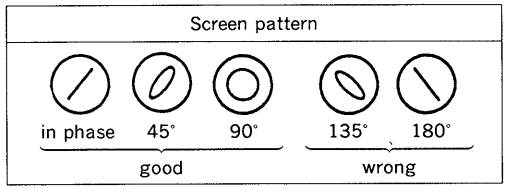


2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 2dB.



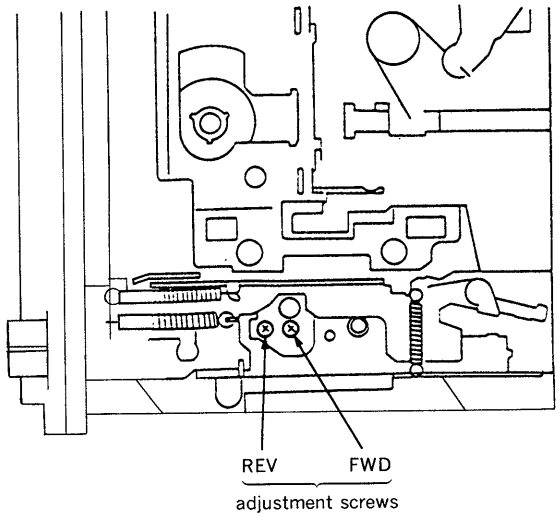
3. Check the phase in the PB mode.





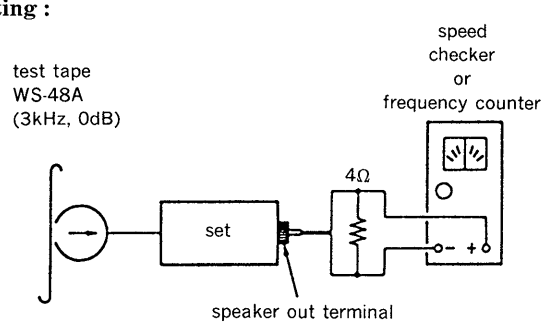
4. Repeat the above adjustment for the REV PB mode.

Adjustment Location:



Tape Speed Adjustment

Setting :



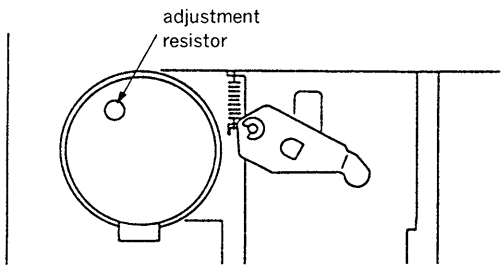
Procedure :

1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

Specification : Constant speed

Speed checker	Frequency counter
−1.5 to +2.5%	2,955 to 3,075Hz

Adjustment Location :



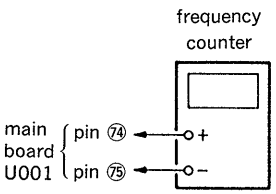
TUNER SECTION | **0dB=1μV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

Clock Frequency Adjustment

Setting :

FM/MW/LW button : FM2



Procedure :

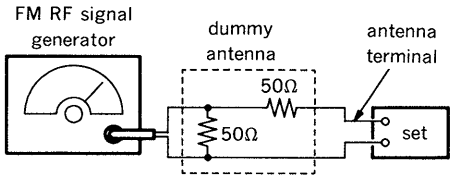
1. Connect the frequency counter between U001 pin ⑭ and pin ⑮ on the main board.
2. Adjust C051 so that the reading on the frequency counter becomes in 7.2MHz±72Hz.

Adjustment Location : See page 14.

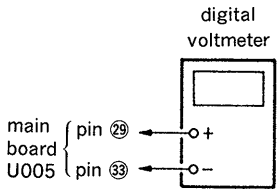
FM IF OV Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : no modulation



Procedure :

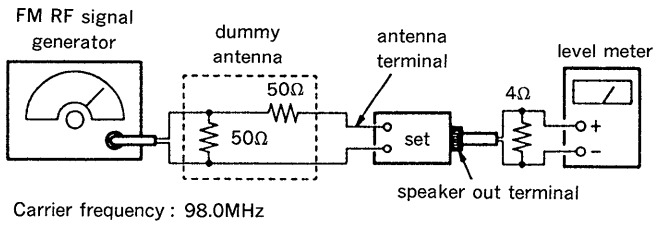
1. Connect a digital voltmeter between U005 pin ㉙ and pin ㉝ on the main board.
2. Adjust L003 so that the reading on the digital voltmeter becomes in 0±0.05V.

Adjustment Location : See page 14.

3dB Mute Limiting Sensitivity Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation (100%)

Procedure :

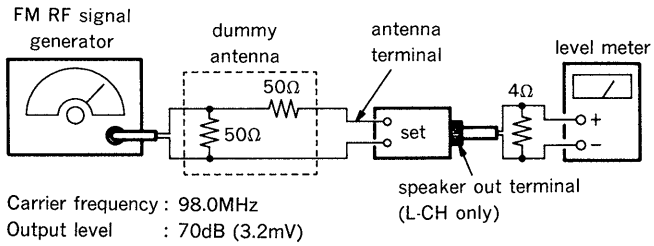
1. Tune the 98.0MHz.
2. The then output level is supposing that (A) dB.
3. Adjust RV155 so that the output level is (A) −3dB then signal generator input set to 13dB.

Adjustment Location : See page 14.

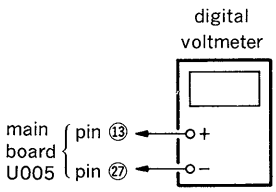
FM Stereo Separation Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 70dB (3.2mV)
Mode : stereo
Modulation : 1kHz, 22.5kHz deviation (30%)
(L-CH only)



Procedure :

1. Connect the digital voltmeter between U005 pin ⑬ and pin ㉗ on the main board.
2. Set R152 so that the reading on the digital voltmeter becomes in more than 1.5V.

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust R154 for maximum reading.

L-CH Stereo separation : Ⓐ—Ⓑ

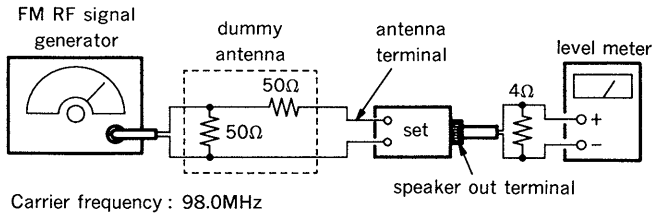
Specification : Separation more than 30dB

Adjustment Location : See page 14.

Pilot Cancel Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : pilot : 7.5kHz deviation (10%)

Procedure :

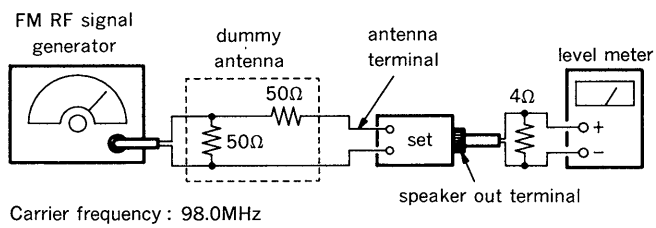
1. Adjust R153 so that the reading on the level meter becomes in minimum and same pilot residue for both L-CH and R-CH.

Adjustment Location : See page 14.

10dB Crosstalk Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 40dB (0.1mV)
Mode : mono
Modulation : 7.5kHz pilot : 22.5kHz deviation (30%)

Procedure :

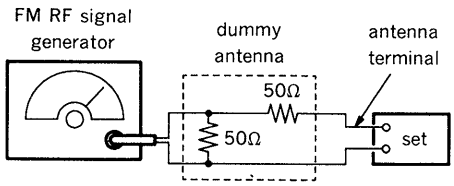
1. Adjust R152 so that the reading on the level meter becomes in 10dB separation.

Adjustment Location : See page 14.

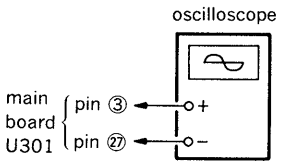
FM DX Locking Sensitivity Adjustment

Setting :

FM/MW/LW button : FM2



Carrier frequency : 98.0MHz
Output level : 22dB (12.6μV)
Mode : mono
Modulation : no modulation

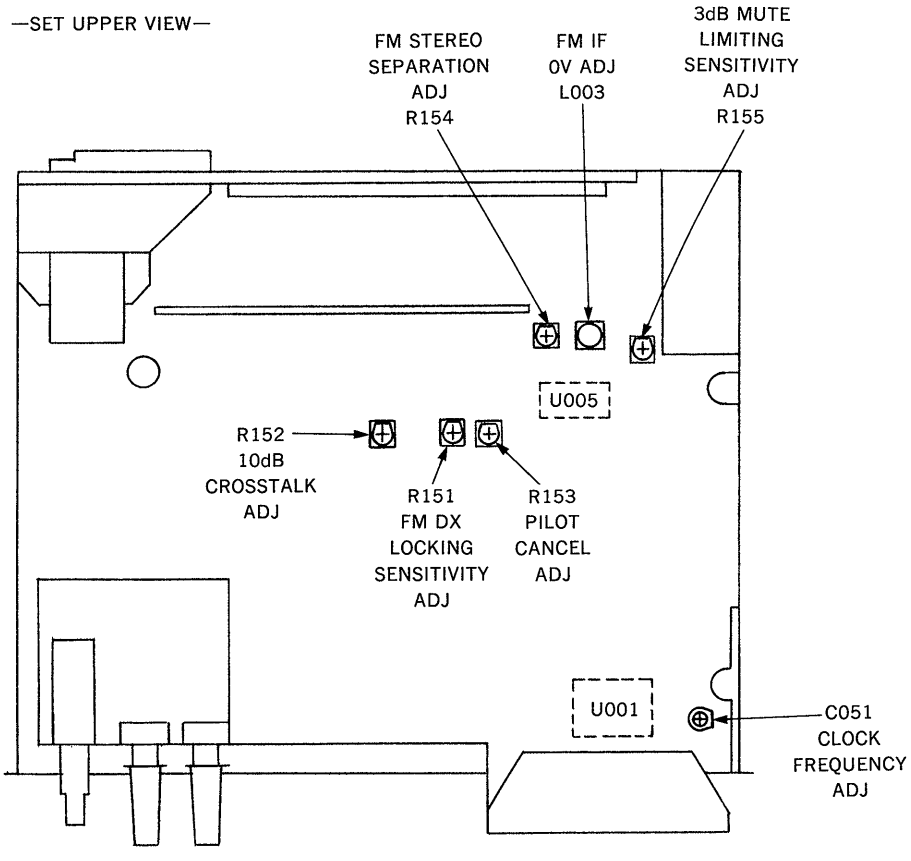


Procedure :

1. Short the U005 pin ㊼ to GND.
2. Connect a oscilloscope between U005 pin ③ and pin ㉗.
3. Short the U005 pin ㊽ to GND.
4. Adjust R151 so that IF signal should shut off, when 2dB signal is reduce.

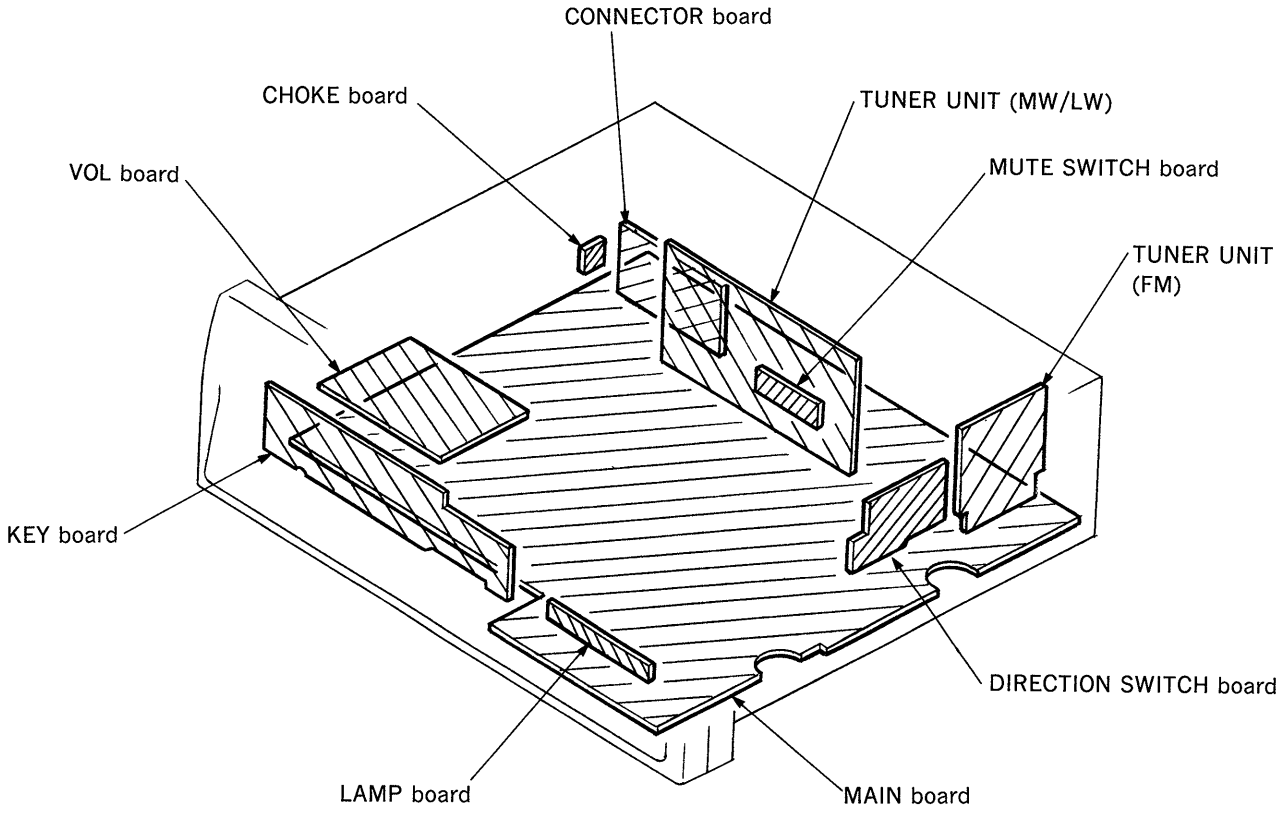
Adjustment Location : See page 14.

Adjustment Location :



SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



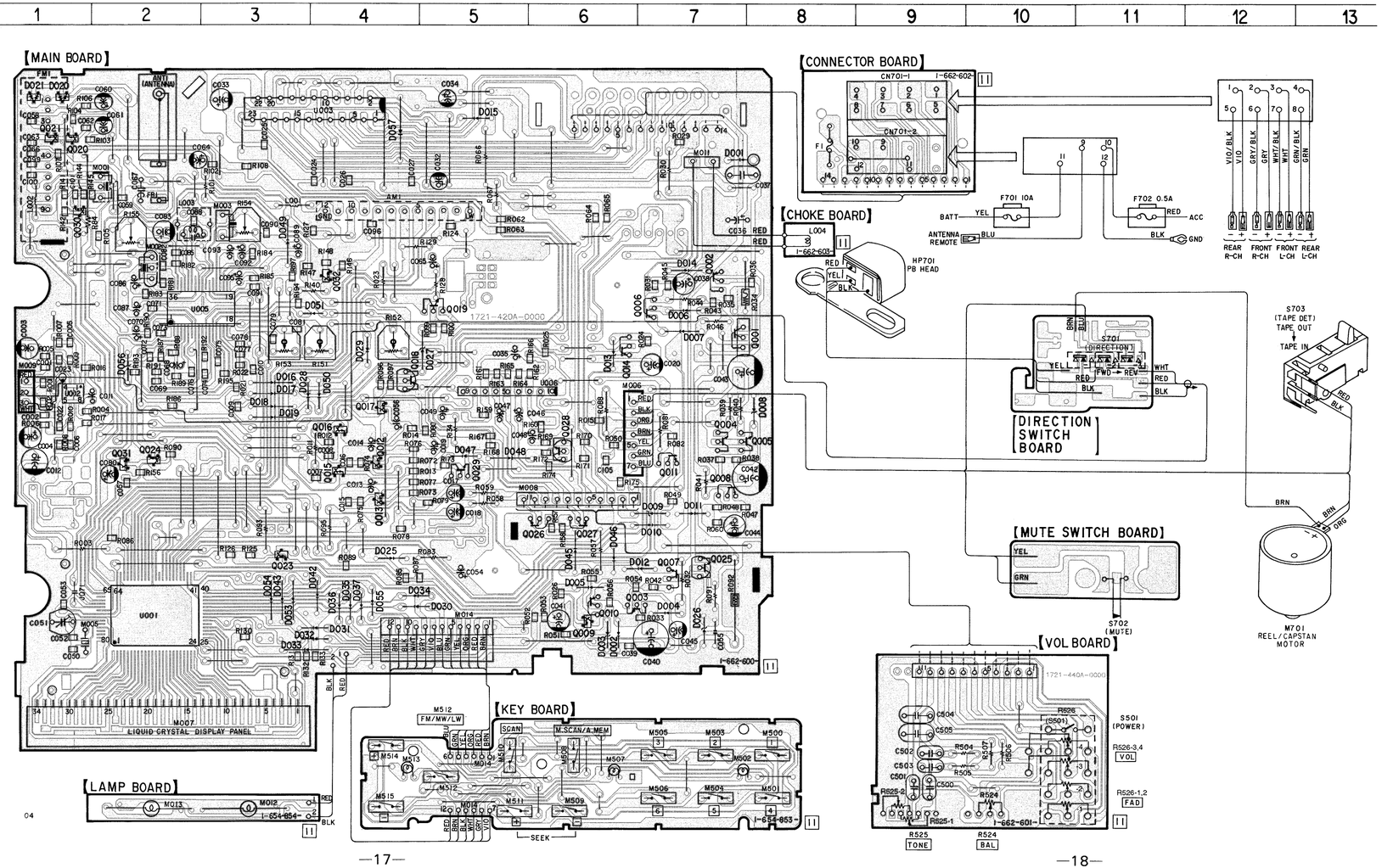
5-2. PRINTED WIRING BOARDS

● **Semiconductor Location**

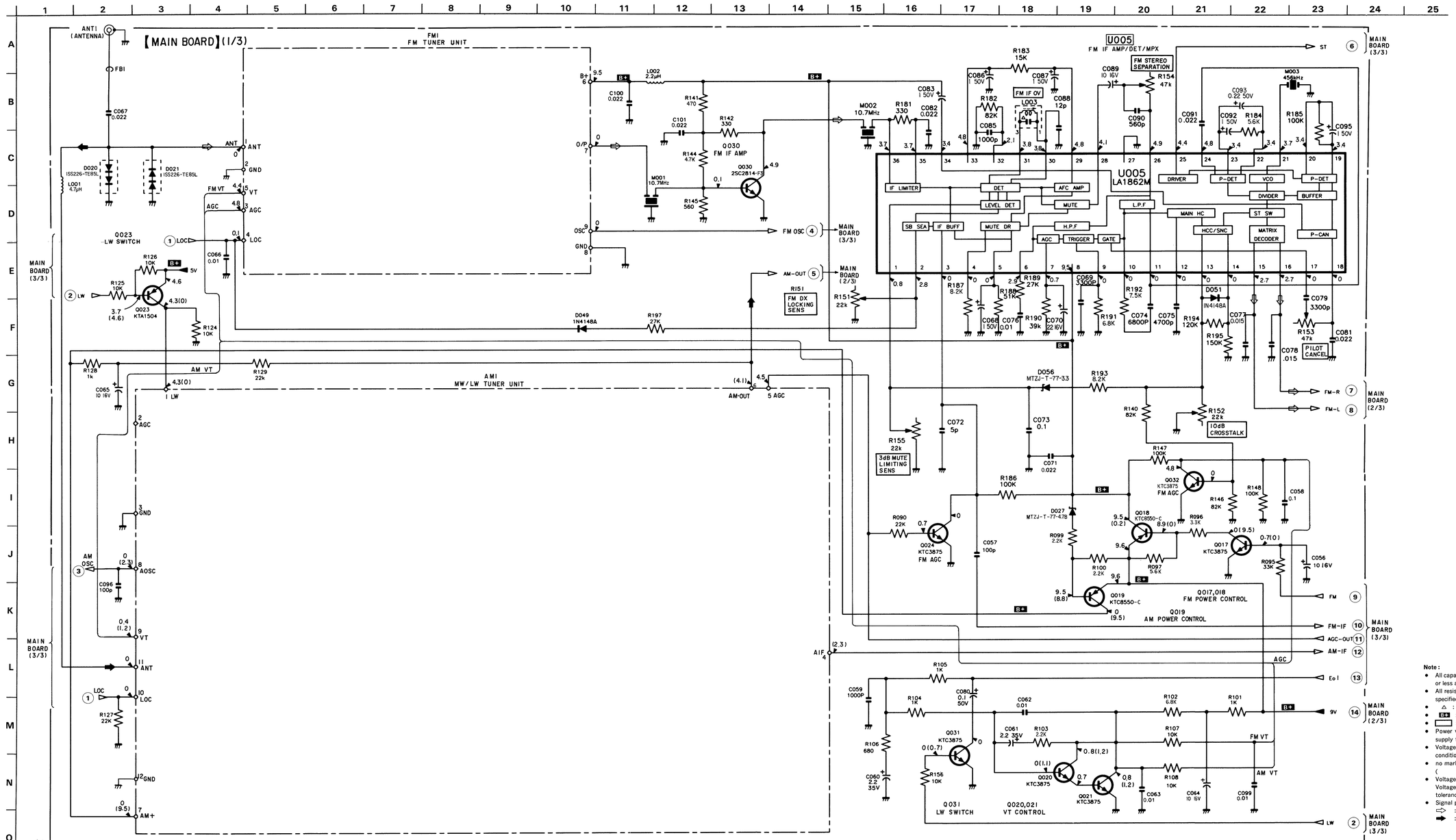
Ref. No.	Location	Ref. No.	Location
D001	B-7	D053	F-3
D002	F-6	D054	F-3
D003	F-6	D055	F-4
D004	F-7	D056	D-2
D005	F-6	D057	A-4
D006	C-7		
D007	C-7	Q001	C-7
D008	D-8	Q002	C-7
D009	E-7	Q003	F-6
D010	E-7	Q004	D-7
D011	E-7	Q005	D-7
D012	E-6	Q006	C-7
D013	D-6	Q007	F-7
D014	C-7	Q008	E-7
D015	A-5	Q009	F-6
D016	D-3	Q010	F-6
D017	D-3	Q011	E-7
D018	D-3	Q012	E-4
D019	D-3	Q013	E-4
D020	A-1	Q014	D-6
D021	A-1	Q015	E-4
D025	E-4	Q016	D-4
D026	F-7	Q017	D-4
D027	D-5	Q018	D-4
D028	D-4	Q019	C-5
D029	C-4	Q020	B-1
D030	F-5	Q021	B-1
D031	F-4	Q023	E-3
D032	F-4	Q024	E-2
D033	F-4	Q025	E-7
D034	F-5	Q026	E-6
D035	F-4	Q027	E-7
D036	F-4	Q028	D-6
D037	F-4	Q029	E-5
D042	F-4	Q030	B-1
D043	F-3	Q031	E-2
D045	E-6	Q032	C-4
D046	E-6		
D047	D-5	U001	F-2
D048	D-5	U002	D-1
D049	B-3	U003	A-4
D050	D-4	U005	C-3
D051	C-4	U006	D-5

Note :

- ○— : parts extracted from the component side.
- ▨ : Pattern on the side which is seen.



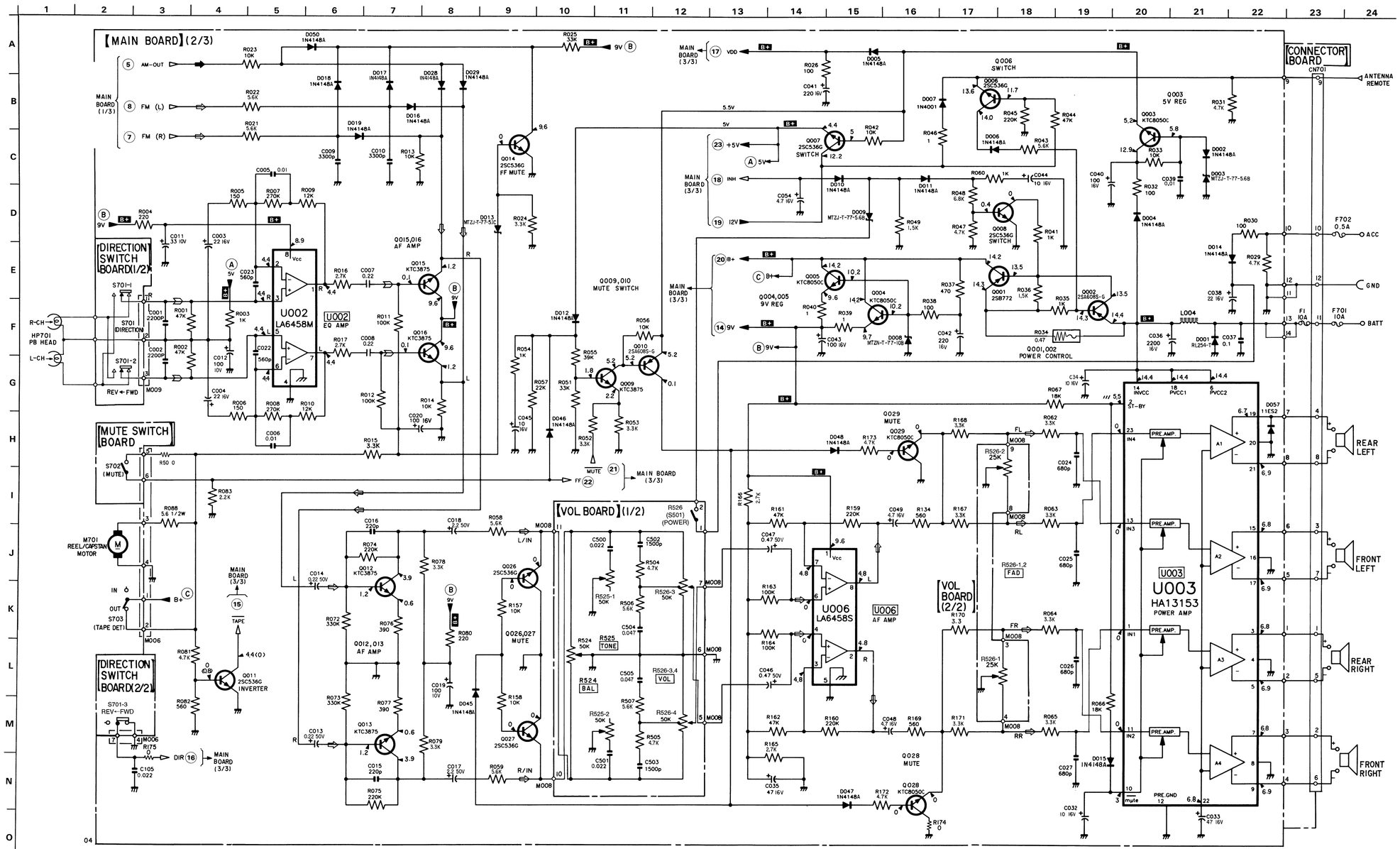
5-3. SCHEMATIC DIAGRAM—MAIN SECTION (1/3)—



Note :

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
  ( ) : MW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : MW

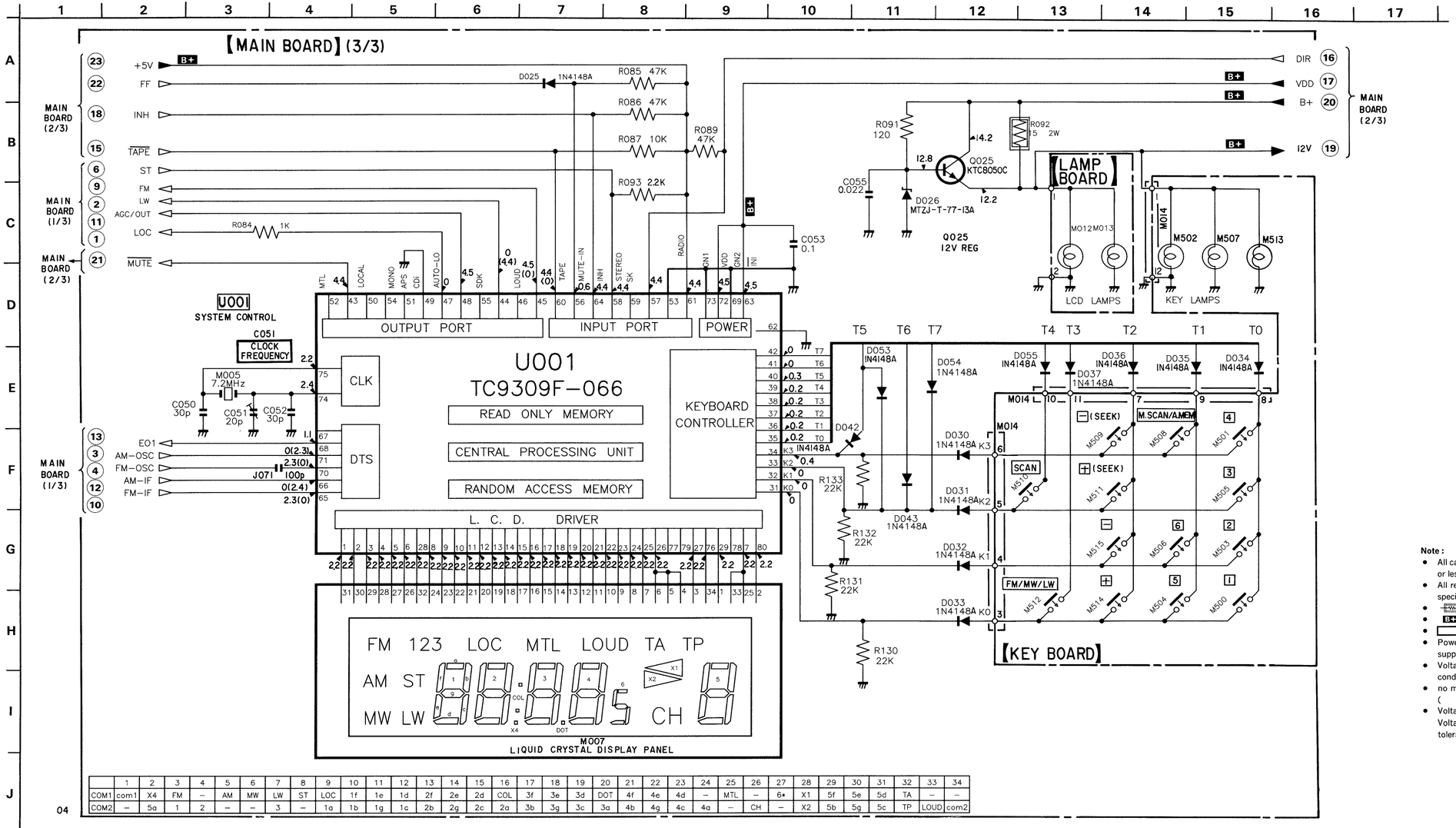
5-4. SCHEMATIC DIAGRAM—MAIN SECTION (2/3)—



Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- : fusible resistor.
- : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
  ( ) : PB
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : MW
  : PB

5-5. SCHEMATIC DIAGRAM—MAIN SECTION (3/3)—



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
COM1	com1	X4	FM	–	AM	MW	LW	ST	LOC	1f	1e	1d	2f	2e	2d	COL	3f	3e	3d	DOT	4f	4e	4d	–	MTL	–	6*	X1	5f	5e	5d	TA	–	–
COM2	–	5a	1	2	–	–	3	–	1a	1b	1g	1c	2b	2g	2c	2a	3b	3g	3c	3a	4b	4g	4c	4a	–	CH	–	X2	5b	5g	5c	TP	LOUD	com2

Note :

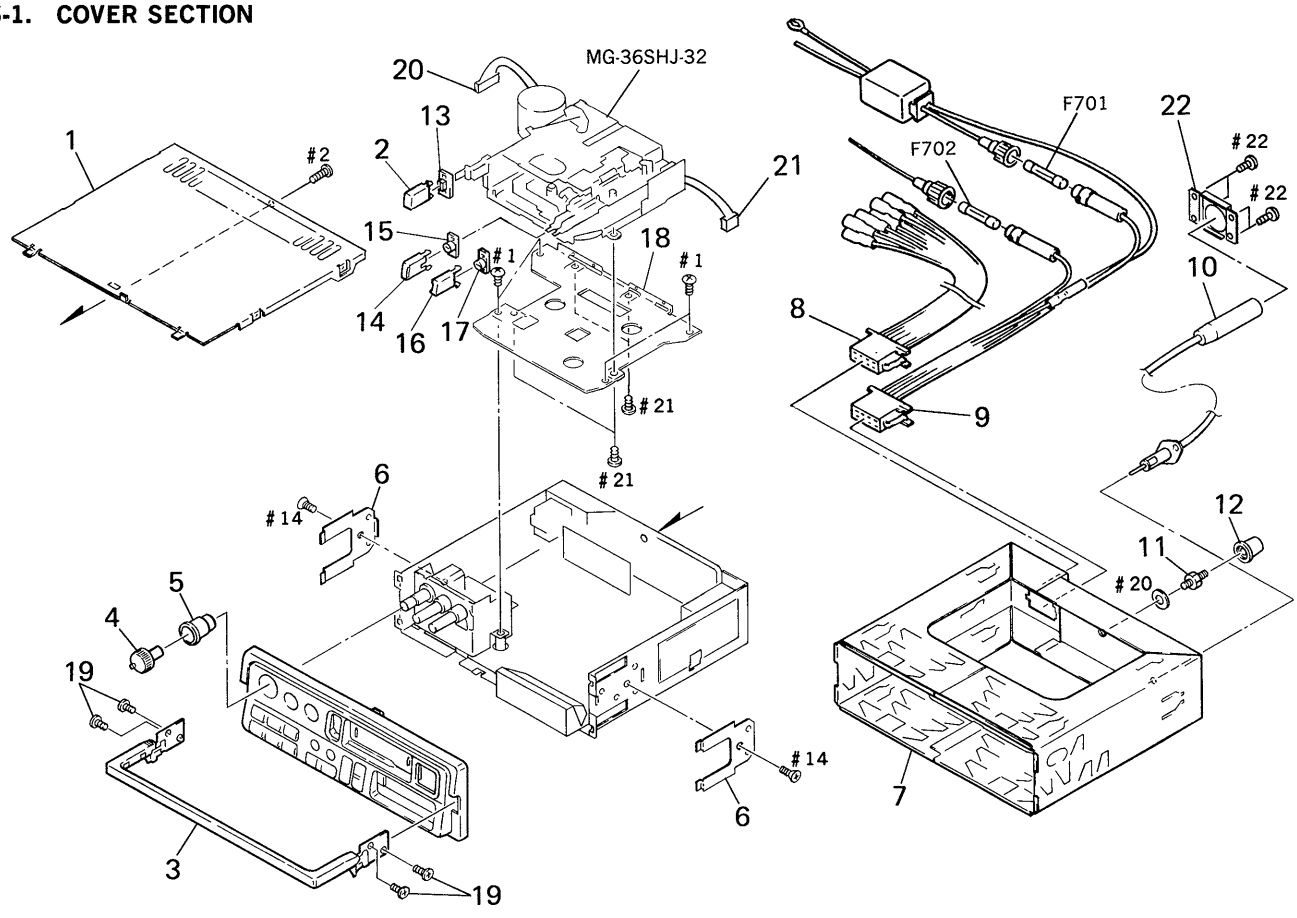
- All capacitors are in μF unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- FW : nonflammable resistor.
- B+ : B+ Line
- : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
  ( ) : MW
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

SECTION 6
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessori and packing materials are given in t last of this parts list.

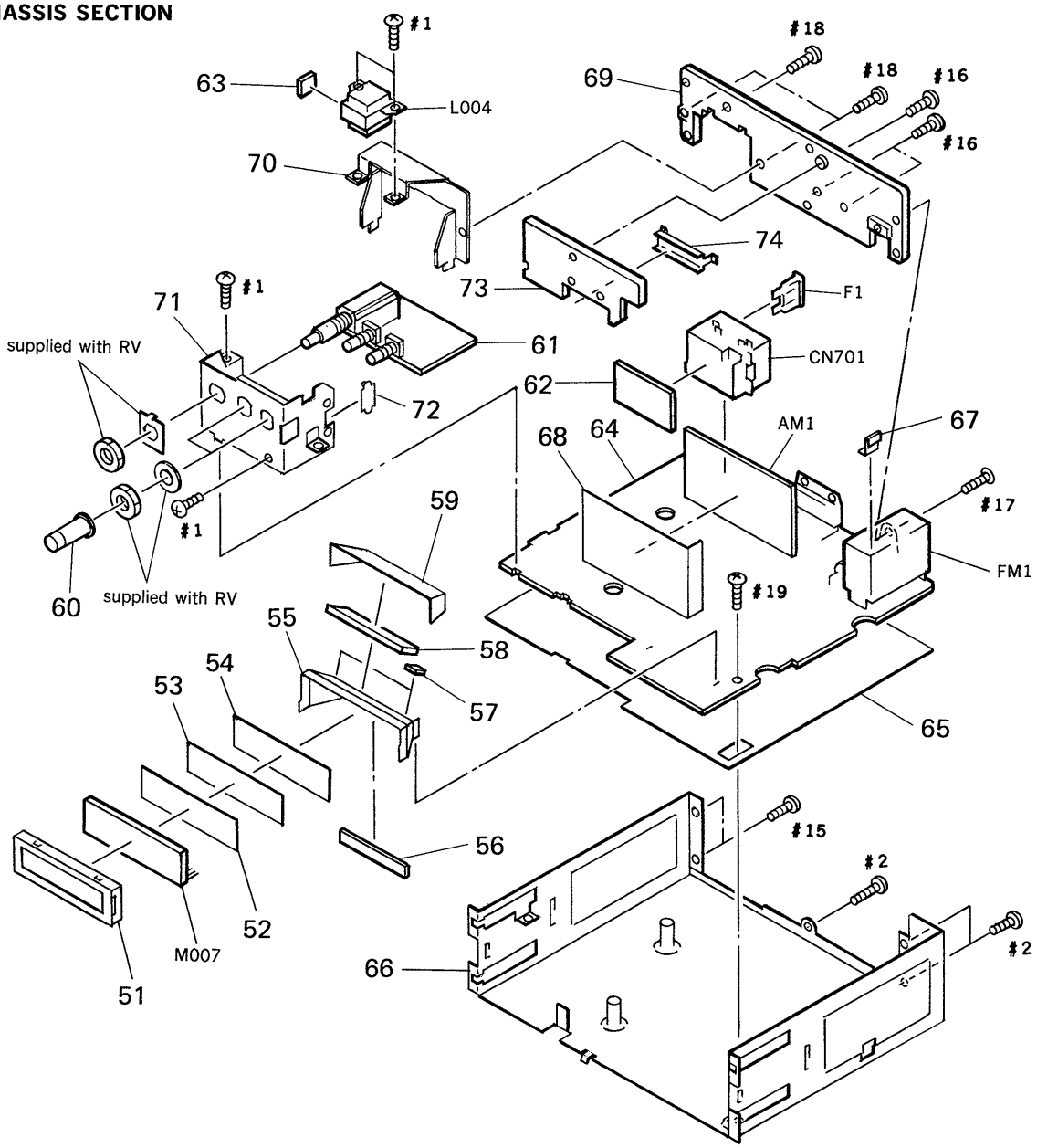
6-1. COVER SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-919-745-01	COVER	
2	3-919-748-01	BUTTON (EJECT)	
3	X-3369-758-1	HANDLE ASSY	
4	3-919-752-01	KNOB (VOL)	
5	3-919-753-01	KNOB (FAD)	
* 6	3-921-170-01	COVER (S)	
7	3-921-173-01	BRACKET	
8	1-769-452-11	CORD (WITH CONNECTOR) (SP)	
9	1-769-396-21	CORD (WITH CONNECTOR) (POWER)	
10	1-769-453-11	CORD (WITH CONNECTOR) (ANT)	
11	3-919-986-01	BOLT, FITTING	
12	3-919-732-01	BUSHING, RUBBER	

Ref. No.	Part No.	Description	Remark
* 13	3-919-751-01	BRACKET (EJECT)	
14	3-919-747-01	BUTTON (REW)	
* 15	3-919-750-01	BRACKET (REW)	
16	3-919-746-01	BUTTON (FF)	
* 17	3-919-749-01	BRACKET (FF)	
* 18	3-919-755-01	BRACKET (MD)	
19	3-921-171-01	SCREW (M2.6X4)	
20	1-769-262-11	CORD (WITH CONNECTOR) 7P	
21	1-769-261-11	CORD (WITH CONNECTOR) 3P	
22	3-938-681-01	BRACKET, ANTENNA RETAINER	
F701	1-532-677-00	FUSE, GLASS TUBE (10A)	
F702	1-532-411-00	FUSE (0.5A)	

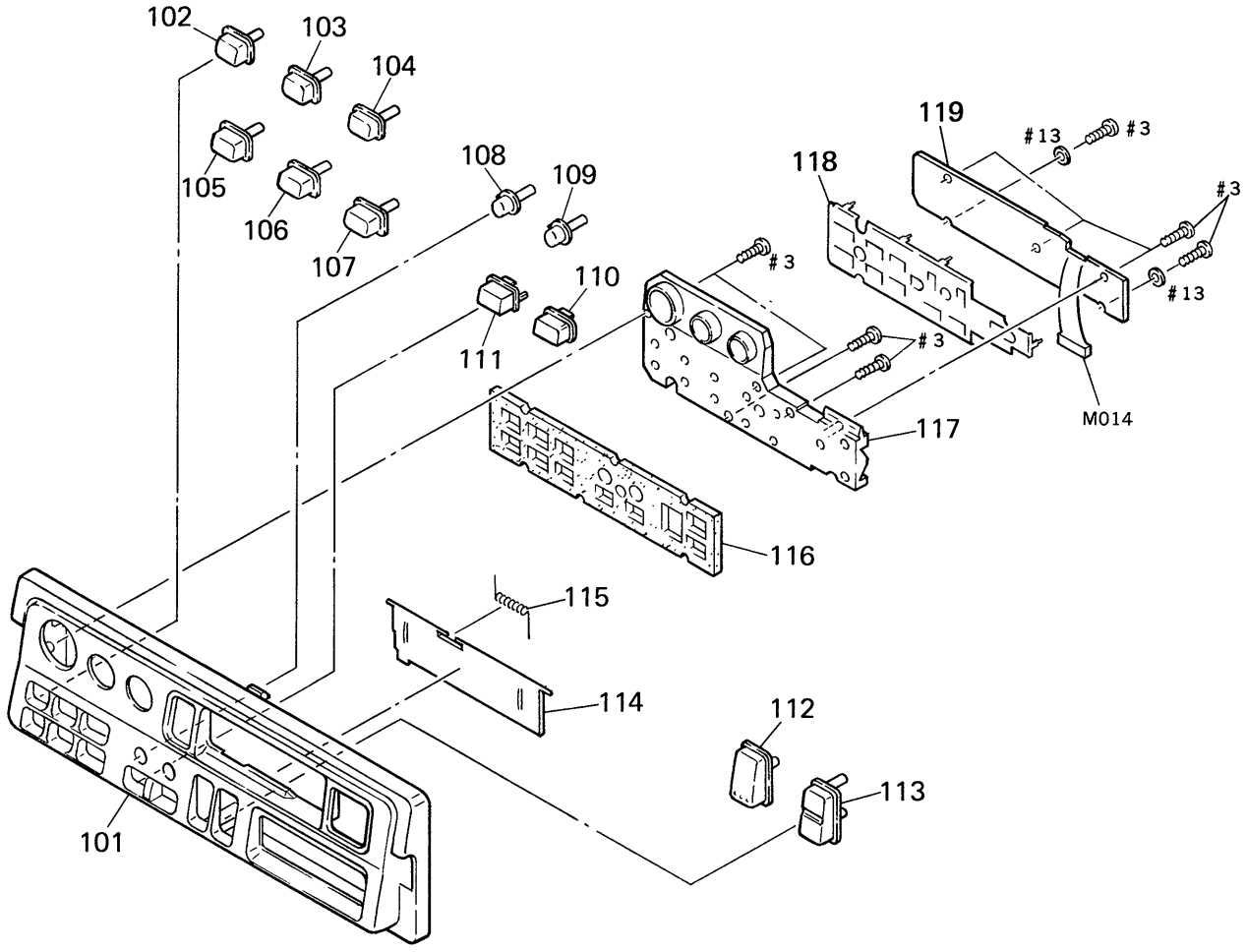
6-2. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 51	3-919-742-01	PLATE (LCD), GROUND	
* 52	3-920-950-01	SHEET (DIFFUSION)	
* 53	3-920-951-01	SHEET (YELLOW)	
* 54	3-920-952-01	SHEET (REFLECTION)	
* 55	3-919-741-01	HOLDER (LCD)	
* 56	1-654-854-11	LAMP BOARD	
* 57	3-920-953-01	CUSHION (LCD2)	
* 58	3-919-743-01	CUSHION (LCD)	
* 59	3-919-989-01	COVER (LCD)	
60	3-919-754-01	KNOB (BAL, TONE)	
* 61	1-662-601-11	VOL BOARD	
* 62	1-662-602-11	CONNECTOR BOARD	
* 63	1-662-603-11	CHOKE BOARD	
* 64	A-3309-550-A	MAIN BOARD, COMPLETE	
* 65	3-920-945-01	INSULATOR	

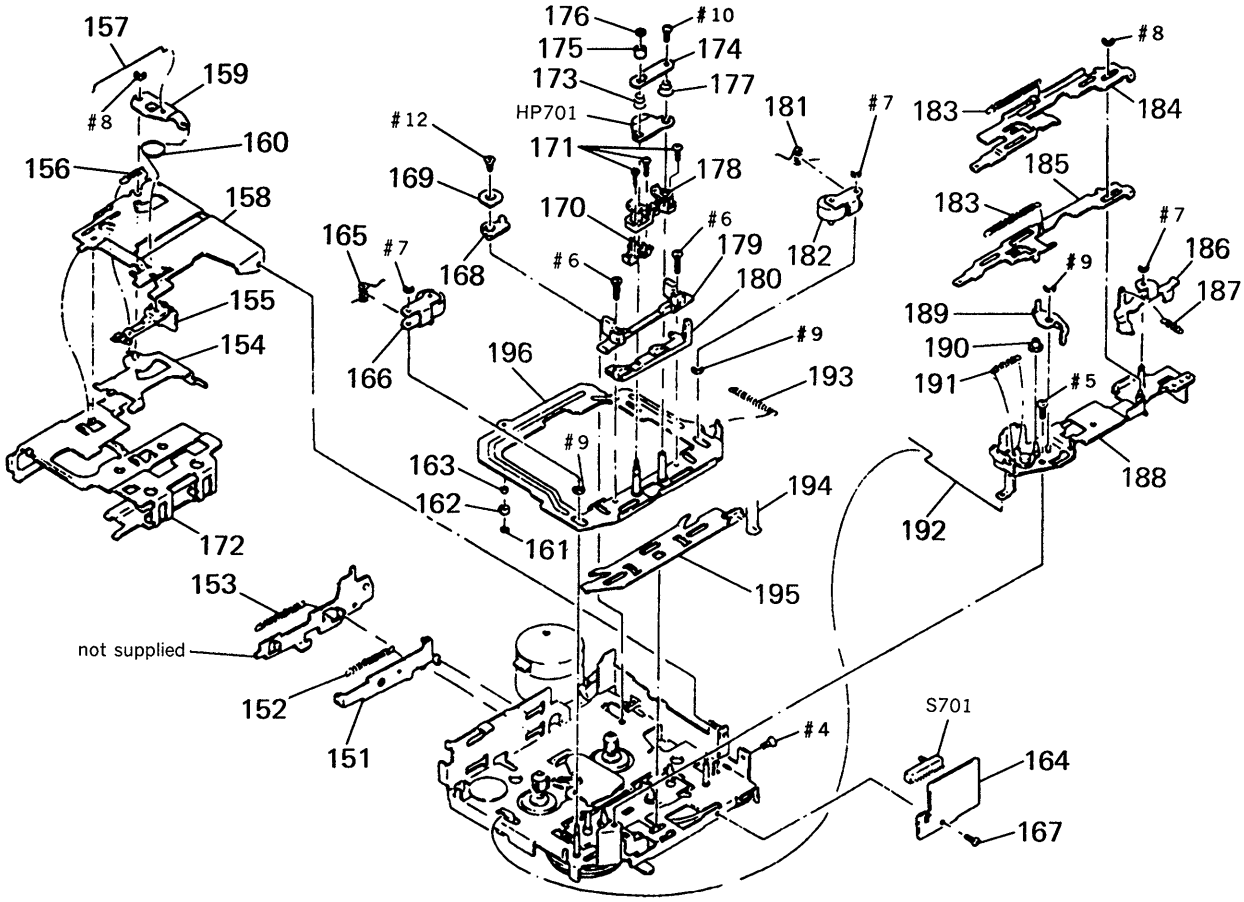
Ref. No.	Part No.	Description	Remark
* 66	X-3369-760-1	CHASSIS ASSY	
67	3-920-946-01	PLATE (TUNER), GROUND	
* 68	3-939-304-01	INSULATOR	
* 69	3-938-676-01	HEAT SINK	
* 70	3-938-678-01	BRACKET (CONNECTOR)	
* 71	3-938-679-01	BRACKET (VR)	
* 72	3-938-680-01	RETAINER (VR), PC BOARD	
* 73	3-938-677-01	HEAT SINK (IC)	
* 74	3-938-674-01	BRACKET	
AM1	1-473-037-11	TUNER UNIT (MW/LW)	
CN701	1-770-228-11	CONNECTOR	
F1	1-533-330-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
FM1	1-693-282-11	TUNER UNIT (FM)	
L004	1-411-952-11	COIL, CHOKE	
M007	1-810-720-11	DISPLAY PANEL, LIQUID CRYSTAL	

6-3. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
101	3-921-180-01	PANEL, FRONT	
102	3-919-759-01	BUTTON (1)	
103	3-919-760-01	BUTTON (2)	
104	3-919-761-01	BUTTON (3)	
105	3-919-762-01	BUTTON (4)	
106	3-919-763-01	BUTTON (5)	
107	3-919-764-01	BUTTON (6)	
108	3-919-765-01	BUTTON (M. SCAN/A. MEM)	
109	3-919-766-01	BUTTON (SCAN)	
110	3-919-767-01	BUTTON (SEEK +)	
111	3-919-768-01	BUTTON (SEEK -)	
112	3-919-769-11	BUTTON (FM/MW/LW)	
113	3-919-770-01	BUTTON (+/-)	
114	3-935-924-01	DOOR, CASSETTE	
115	3-919-739-01	SPRING (C DOOR)	
* 116	3-919-942-01	CUSHION (BUTTON)	
* 117	3-919-737-01	PLATE, LIGHT GUIDE	
* 118	3-920-955-01	PLATE (KEY), GROUND	
* 119	1-654-853-11	KEY BOARD	
M014	1-769-263-11	CORD (WITH CONNECTOR) 12P	

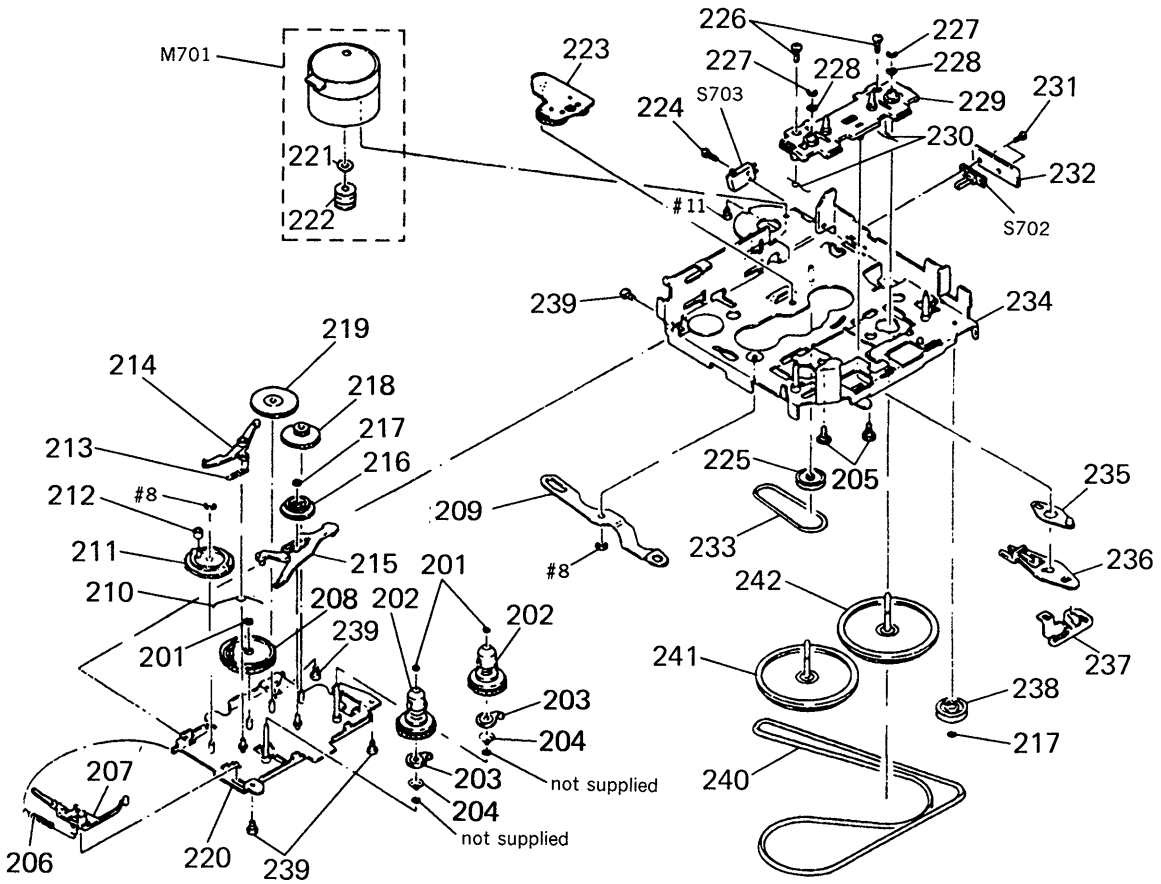
6-4. MECHANISM DECK SECTION 1 (MG-36SHJ-32)



Ref. No.	Part No.	Description	Remark
* 151	3-392-978-01	LEVER, EJECT	
152	3-392-950-01	SPRING	
153	3-392-951-01	SPRING	
* 154	3-392-921-01	LOCK ASSY, EJECT CAM	
155	3-392-972-01	HOOKER, TAPE	
156	3-392-953-01	SPRING	
157	3-392-969-01	LINK, RETURN	
158	3-375-383-01	HANGER (X), CASSETTE	
* 159	3-392-932-01	PLATE, CENTER	
160	3-392-961-01	SPRING (B)	
161	3-570-615-00	POLY-WASHER (DIA. 1.2)	
162	3-392-945-01	ROLLER (A), H.P	
163	3-392-942-01	ROLLER (B), H.P	
164	3-392-970-01	CHASSIS, SWITCH (DIRECTION SWITCH BOARD)	
165	3-392-958-01	SPRING (R)	
166	3-375-378-01	ARM (R) ASSY, PINCH	
* 167	4-908-792-11	SCREW (B2)	
168	3-372-244-01	ARM (N), MUTE	
* 169	3-397-427-01	COLLAR, MUTE ARM	
170	3-377-908-01	SHIM (X), ADJUSTOR	
171	3-375-379-01	SCREW, AZIMUTH	
172	3-375-384-01	HOLDER (X), CASSETTE	
173	3-392-956-01	SPRING (A)	
* 174	3-392-930-01	RETAINER, SPRING	

Ref. No.	Part No.	Description	Remark
175	3-392-943-01	ROLLER, FF	
176	3-676-387-00	POLY-SLIDER (DIA. 1.6)	
177	3-392-955-01	SPRING (A)	
* 178	3-379-142-01	ARM (B), ADJUSTOR	
179	3-392-984-02	GUIDE, TAPE	
180	3-377-909-02	LINK (X), ADJUSTOR	
181	3-392-957-01	SPRING (F)	
182	3-375-377-01	ARM (F) ASSY, PINCH	
183	3-392-948-01	SPRING	
* 184	3-392-980-01	LEVER, FF	
* 185	3-392-981-01	LEVER, REW	
* 186	3-392-935-01	ARM, LOCK	
187	3-392-917-01	SPRING	
* 188	3-372-242-01	BRACKET ASSY (D), LEVER	
* 189	3-392-933-01	LEVER (B), CHANGE	
190	3-392-994-01	ROLLER, PROGRAM	
191	3-392-954-01	SPRING	
192	3-372-243-01	LINK (B), SELECTOR	
193	3-392-952-01	SPRING	
194	3-392-962-01	SPRING	
* 195	3-392-919-01	ARM ASSY, F, R SELECTION	
* 196	3-392-975-05	PLATE ASSY (S), HEAD	
HP701	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)	
S701	1-692-502-11	SWITCH, SLIDE (DIRECTION)	

6-5. MECHANISM DECK SECTION 2 (MG-36SHJ-32)



Ref. No.	Part No.	Description	Remark
201	3-676-387-00	POLY-SLIDER (DIA. 1.6)	
202	3-376-196-01	SPINDLE ASSY (S), REEL	
203	3-375-380-01	CAM ASSY, DETECTION	
204	3-370-619-01	SPRING, BACK TENSION	
205	3-392-918-01	SCREW, EJECT HOOK	
206	3-392-959-01	SPRING	
207	3-392-985-02	RATCHET	
208	3-392-990-01	GEAR, DETECTION	
* 209	3-392-979-01	LEVER, REVERSE	
210	3-392-960-01	SPRING	
211	3-392-987-01	GEAR, SELECTOR	
212	3-392-944-01	COLLAR (SELECTOR GEAR)	
213	3-375-131-01	SPRING, GEAR LOCK ARM	
214	3-392-989-02	ARM, GEAR LOCK	
215	3-392-986-01	ARM, SENSOR	
216	3-392-915-01	GEAR, IDLE	
217	3-570-615-00	POLY-WASHER (DIA. 1.2)	
218	3-392-936-01	GEAR (A)	
219	3-392-937-01	GEAR (B)	
* 220	3-392-976-01	BASE ASSY, REEL	
* 221	3-392-912-01	WASHER, MYLAR	
* 222	3-392-913-01	PULLEY, MOTOR	
223	3-392-916-01	ARM ASSY, TU GEAR	

Ref. No.	Part No.	Description	Remark
224	3-318-203-11	SCREW (B1.7X6), TAPPING	
225	3-392-938-01	GEAR, PULLY	
226	3-318-204-81	SCREW (M1.7X3), TAPPING	
227	3-590-768-00	RING (A), E	
228	3-701-437-11	POLY-SLIDER (A)	
* 229	3-375-381-01	BRACKET ASSY (X), CM	
230	3-392-963-01	SPRING (R)	
231	3-318-204-91	SCREW (M1.7X4), TAPPING	
232	3-375-376-01	MUTE (PWB) (MUTE SWITCH BOARD)	
233	3-375-375-02	BELT (C), SUB	
* 234	3-392-974-01	CHASSIS ASSY, MAIN	
* 235	3-392-925-01	ARM (A) ASSY, F.R	
* 236	3-392-939-01	ARM, FF	
* 237	3-392-934-01	ARM (B), F.R	
238	3-392-941-01	PULLEY (A), IDLE	
* 239	4-908-792-11	SCREW (B2)	
240	3-392-967-01	BELT, MAIN	
241	3-392-995-02	FLYWHEEL ASSY (BR)	
242	3-392-926-02	FLYWHEEL ASSY (BF)	
M701	X-3365-046-1	MOTOR ASSY (REEL/CAPSTAN)	
S702	1-692-065-11	SWITCH, LEAF (MUTE)	
S703	1-554-790-21	SWITCH, POWER (TAPE DET)	

SECTION 7
ELECTRICAL PARTS LIST

CHOKE **CONNECTOR** **KEY** **LAMP** **MAIN**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark
*	1-662-603-11	CHOKE BOARD	
		**********	
		< COIL >	
L004	1-411-952-11	COIL, CHOKE	
**********			
*	1-662-602-11	CONNECTOR BOARD	
		**********	
		< CONNECTOR >	
CN701	1-770-228-11	CONNECTOR	
**********			
*	1-654-853-11	KEY BOARD	
		*********	
*	3-920-955-01	PLATE (KEY), GROUND	
		< CONNECTOR >	
M014	1-769-263-11	CORD (WITH CONNECTOR) 12P	
		< SWITCH >	
M500	1-570-204-41	SWITCH, KEY BOARD (1)	
M501	1-570-204-41	SWITCH, KEY BOARD (4)	
M503	1-570-204-41	SWITCH, KEY BOARD (2)	
M504	1-570-204-41	SWITCH, KEY BOARD (5)	
M505	1-570-204-41	SWITCH, KEY BOARD (3)	
M506	1-570-204-41	SWITCH, KEY BOARD (6)	
M508	1-570-204-41	SWITCH, KEY BOARD (M. SCAN/A. MEM)	
M509	1-570-204-41	SWITCH, KEY BOARD (SEEK -)	
M510	1-570-204-41	SWITCH, KEY BOARD (SCAN)	
M511	1-570-204-41	SWITCH, KEY BOARD (SEEK +)	
M512	1-570-204-41	SWITCH, KEY BOARD (FM/MW/LW)	
M514	1-570-204-41	SWITCH, KEY BOARD (+)	
M515	1-570-204-41	SWITCH, KEY BOARD (-)	
		< PILOT LAMP >	
M502	1-517-375-11	LAMP, PILOT	
M507	1-517-375-11	LAMP, PILOT	
M513	1-517-375-11	LAMP, PILOT	
**********			
*	1-654-854-11	LAMP BOARD	
		**********	
		< PILOT LAMP >	
M012	1-517-376-11	LAMP, PILOT	
M013	1-517-376-11	LAMP, PILOT	
**********			
*	A-3309-550-A	MAIN BOARD, COMPLETE	
		**********	
		< TUNER >	
AM1	1-473-037-11	TUNER UNIT (MW/LW)	
		< CONNECTOR >	
ANT1	1-770-052-11	CONNECTOR (ANTENNA)	
		< CAPACITOR >	

C001	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V
C002	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V
C003	1-124-234-00	ELECT	22uF	20% 16V
C004	1-124-234-00	ELECT	22uF	20% 16V
C005	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C006	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C007	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V
C008	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V
C009	1-164-182-11	CERAMIC CHIP	0.0033uF	10% 50V
C010	1-164-182-11	CERAMIC CHIP	0.0033uF	10% 50V
C011	1-124-229-00	ELECT	33uF	20% 10V
C012	1-124-443-00	ELECT	100uF	20% 10V
C013	1-124-464-11	ELECT	0.22uF	20% 50V
C014	1-124-464-11	ELECT	0.22uF	20% 50V
C015	1-163-125-00	CERAMIC CHIP	220PF	5% 50V
C016	1-163-125-00	CERAMIC CHIP	220PF	5% 50V
C017	1-124-257-00	ELECT	2.2uF	20% 50V
C018	1-124-257-00	ELECT	2.2uF	20% 50V
C019	1-124-443-00	ELECT	100uF	20% 10V

MAIN

Ref. No.	Part No.	Description			Remark
C020	1-126-933-61	ELECT	100uF	20%	16V
C022	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C023	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C024	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C025	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C026	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C027	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C032	1-126-157-11	ELECT	10uF	20%	16V
C033	1-124-589-11	ELECT	47uF	20%	16V
C034	1-126-157-11	ELECT	10uF	20%	16V
C035	1-124-589-11	ELECT	47uF	20%	16V
C036	1-126-768-11	ELECT	2200uF	20%	16V
C037	1-137-399-11	MYLAR	0.1uF	5%	50V
C038	1-124-234-00	ELECT	22uF	20%	16V
C039	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C040	1-126-933-61	ELECT	100uF	20%	16V
C041	1-126-934-11	ELECT	220uF	20%	16V
C042	1-126-934-11	ELECT	220uF	20%	16V
C043	1-126-933-61	ELECT	100uF	20%	16V
C044	1-126-157-11	ELECT	10uF	20%	16V
C045	1-126-157-11	ELECT	10uF	20%	16V
C046	1-126-159-11	ELECT	0.47uF	20%	50V
C047	1-126-159-11	ELECT	0.47uF	20%	50V
C048	1-126-288-11	ELECT	4.7uF	20%	16V
C049	1-126-288-11	ELECT	4.7uF	20%	16V
C050	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C052	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C053	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C054	1-126-288-11	ELECT	4.7uF	20%	16V
C055	1-161-055-00	CERAMIC	0.022uF	10%	50V
C056	1-126-157-11	ELECT	10uF	20%	16V
C057	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C058	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C059	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C060	1-126-161-11	ELECT	2.2uF	20%	50V
C061	1-126-161-11	ELECT	2.2uF	20%	50V
C062	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C063	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C064	1-126-157-11	ELECT	10uF	20%	16V
C065	1-126-157-11	ELECT	10uF	20%	16V
C066	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C067	1-161-055-00	CERAMIC	0.022uF	10%	50V
C068	1-126-301-11	ELECT	1uF	20%	50V
C069	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C070	1-124-234-00	ELECT	22uF	20%	16V
C071	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C072	1-163-222-11	CERAMIC CHIP	5PF	0.25PF	50V
C073	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C074	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C075	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C076	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C077	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C078	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C079	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C080	1-124-463-00	ELECT	0.1uF	20%	50V
C081	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C082	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C083	1-126-301-11	ELECT	1uF	20%	50V
C085	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C086	1-126-301-11	ELECT	1uF	20%	50V
C087	1-126-301-11	ELECT	1uF	20%	50V
C088	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C089	1-126-157-11	ELECT	10uF	20%	16V
C090	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C091	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C092	1-126-301-11	ELECT	1uF	20%	50V
C093	1-124-464-11	ELECT	0.22uF	20%	50V
C095	1-126-301-11	ELECT	1uF	20%	50V
C096	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C099	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C100	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C101	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C105	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
J071	1-102-973-00	CERAMIC	100PF	5%	50V
		< TRIMMER >			
C051	1-141-276-00	CAP, TRIMMER	20PF		
		< DIODE >			
D001	8-719-989-62	DIODE	RL254		
D002	8-719-989-90	DIODE	1N4148A		
D003	8-719-109-89	DIODE	RD5.6ESB2		
D004	8-719-989-90	DIODE	1N4148A		
D005	8-719-989-90	DIODE	1N4148A		
D006	8-719-989-90	DIODE	1N4148A		
D007	8-719-200-02	DIODE	10E2		
D008	8-719-921-75	DIODE	MTZN-10B		
D009	8-719-109-89	DIODE	RD5.6ESB2		
D010	8-719-989-90	DIODE	1N4148A		
D011	8-719-989-90	DIODE	1N4148A		
D012	8-719-989-90	DIODE	1N4148A		
D013	8-719-921-44	DIODE	MTZJ-5.1C		
D014	8-719-989-90	DIODE	1N4148A		
D015	8-719-989-90	DIODE	1N4148A		
D016	8-719-989-90	DIODE	1N4148A		
D017	8-719-989-90	DIODE	1N4148A		
D018	8-719-989-90	DIODE	1N4148A		
D019	8-719-989-90	DIODE	1N4148A		

Ref. No.	Part No.	Description	Remark
D020	8-719-800-76	DIODE 1SS226	
D021	8-719-800-76	DIODE 1SS226	
D025	8-719-989-90	DIODE 1N4148A	
D026	8-719-921-87	DIODE MTZJ-13A	
D027	8-719-010-34	DIODE UZ-4.7BSC	
D028	8-719-989-90	DIODE 1N4148A	
D029	8-719-989-90	DIODE 1N4148A	
D030	8-719-989-90	DIODE 1N4148A	
D031	8-719-989-90	DIODE 1N4148A	
D032	8-719-989-90	DIODE 1N4148A	
D033	8-719-989-90	DIODE 1N4148A	
D034	8-719-989-90	DIODE 1N4148A	
D035	8-719-989-90	DIODE 1N4148A	
D036	8-719-989-90	DIODE 1N4148A	
D037	8-719-989-90	DIODE 1N4148A	
D042	8-719-989-90	DIODE 1N4148A	
D043	8-719-989-90	DIODE 1N4148A	
D045	8-719-989-90	DIODE 1N4148A	
D046	8-719-989-90	DIODE 1N4148A	
D047	8-719-989-90	DIODE 1N4148A	
D048	8-719-989-90	DIODE 1N4148A	
D049	8-719-989-90	DIODE 1N4148A	
D050	8-719-989-90	DIODE 1N4148A	
D051	8-719-989-90	DIODE 1N4148A	
D053	8-719-989-90	DIODE 1N4148A	
D054	8-719-989-90	DIODE 1N4148A	
D055	8-719-989-90	DIODE 1N4148A	
D056	8-719-981-99	DIODE MTZJ-3.3	
D057	8-719-200-82	DIODE 11ES2	
		< FUSE >	
F1	1-533-330-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< FERRITE BEAD >	
FB1	1-500-176-11	BEAD, FERRITE	
		< TUNER >	
FM1	1-693-282-11	TUNER UNIT (FM)	
		< COIL >	
L001	1-410-324-11	INDUCTOR 4.7uH	
L002	1-410-967-11	INDUCTOR 2.2uH	
L003	1-411-127-11	COIL, FM DET	
		< FILTER >	
M001	1-567-107-00	FILTER, CERAMIC (10.7MHz)	
M002	1-760-022-11	FILTER, CERAMIC (10.7MHz)	
		< VIBRATOR >	
M003	1-579-278-11	VIBRATOR, CERAMIC (456kHz)	
M005	1-760-531-11	VIBRATOR, CRYSTAL (7.2MHz)	
		< CONNECTOR >	
M006	1-770-051-11	CONNECTOR 7P	
M009	1-770-083-11	CONNECTOR 3P	
M014	1-770-084-11	CONNECTOR 12P	
		< LIQUID CRYSTAL DISPLAY >	
M007	1-810-720-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< FLAT CABLE >	
M008	1-769-265-11	CABLE, FLAT 11P	
		< TRANSISTOR >	
Q001	8-729-177-22	TRANSISTOR 2SB772-Q	
Q002	8-729-173-38	TRANSISTOR 2SA733-K	
Q003	1-810-731-11	TRANSISTOR KTC8050C	
Q004	1-810-731-11	TRANSISTOR KTC8050C	
Q005	1-810-731-11	TRANSISTOR KTC8050C	
Q006	1-800-385-13	TRANSISTOR 2SC536-G	
Q007	1-800-385-13	TRANSISTOR 2SC536-G	
Q008	1-800-385-13	TRANSISTOR 2SC536-G	
Q009	8-729-034-51	TRANSISTOR KTC3875	
Q010	8-729-173-38	TRANSISTOR 2SA733-K	
Q011	1-800-385-13	TRANSISTOR 2SC536-G	
Q012	8-729-034-51	TRANSISTOR KTC3875	
Q013	8-729-034-51	TRANSISTOR KTC3875	
Q014	1-800-385-13	TRANSISTOR 2SC536-G	
Q015	8-729-034-51	TRANSISTOR KTC3875	
Q016	8-729-034-51	TRANSISTOR KTC3875	
Q017	8-729-034-51	TRANSISTOR KTC3875	
Q018	8-729-033-73	TRANSISTOR KTC8550-C	
Q019	8-729-033-73	TRANSISTOR KTC8550-C	
Q020	8-729-034-51	TRANSISTOR KTC3875	
Q021	8-729-034-51	TRANSISTOR KTC3875	
Q023	8-729-034-50	TRANSISTOR KTA1504	
Q024	8-729-034-51	TRANSISTOR KTC3875	
Q025	1-810-731-11	TRANSISTOR KTC8050C	
Q026	1-800-385-13	TRANSISTOR 2SC536-G	
Q027	1-800-385-13	TRANSISTOR 2SC536-G	
Q028	1-810-731-11	TRANSISTOR KTC8050C	
Q029	1-810-731-11	TRANSISTOR KTC8050C	
Q030	8-729-804-71	TRANSISTOR 2SC2814-F3	
Q031	8-729-034-51	TRANSISTOR KTC3875	
Q032	8-729-034-51	TRANSISTOR KTC3875	

MAIN

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R001	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R002	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R003	1-249-417-11	CARBON	1K	5%	1/4W
R004	1-216-033-00	METAL CHIP	220	5%	1/10W
R005	1-216-029-00	METAL CHIP	150	5%	1/10W
R006	1-216-029-00	METAL CHIP	150	5%	1/10W
R007	1-216-107-00	METAL CHIP	270K	5%	1/10W
R008	1-216-107-00	METAL CHIP	270K	5%	1/10W
R009	1-216-075-00	METAL CHIP	12K	5%	1/10W
R010	1-216-075-00	METAL CHIP	12K	5%	1/10W
R011	1-249-441-11	CARBON	100K	5%	1/4W
R012	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R013	1-216-073-00	METAL CHIP	10K	5%	1/10W
R014	1-216-073-00	METAL CHIP	10K	5%	1/10W
R015	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R016	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R017	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R021	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R022	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R023	1-249-429-11	CARBON	10K	5%	1/4W
R024	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R025	1-216-085-00	METAL CHIP	33K	5%	1/10W
R026	1-216-025-00	METAL GLAZE	100	5%	1/10W
R029	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R030	1-247-807-11	CARBON	100	5%	1/4W
R031	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R032	1-247-807-11	CARBON	100	5%	1/4W
R033	1-216-073-00	METAL CHIP	10K	5%	1/10W
R034	1-217-371-00	FUSIBLE	0.47	5%	1/4W F
R035	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R036	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R037	1-216-041-00	METAL CHIP	470	5%	1/10W
R038	1-216-025-00	METAL GLAZE	100	5%	1/10W
R039	1-249-381-11	CARBON	1	5%	1/4W
R040	1-249-381-11	CARBON	1	5%	1/4W
R041	1-249-417-11	CARBON	1K	5%	1/4W
R042	1-216-073-00	METAL CHIP	10K	5%	1/10W
R043	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R044	1-249-437-11	CARBON	47K	5%	1/4W
R045	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R046	1-249-381-11	CARBON	1	5%	1/4W
R047	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R048	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R049	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R050	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R051	1-216-085-00	METAL CHIP	33K	5%	1/10W
R052	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R053	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R054	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R055	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R056	1-216-073-00	METAL CHIP	10K	5%	1/10W
R057	1-247-863-00	CARBON	22K	5%	1/4W
R058	1-249-426-11	CARBON	5.6K	5%	1/4W
R059	1-249-426-11	CARBON	5.6K	5%	1/4W
R060	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R062	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R063	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R064	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R065	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R066	1-249-432-11	CARBON	18K	5%	1/4W
R067	1-249-432-11	CARBON	18K	5%	1/4W
R072	1-216-109-00	METAL CHIP	330K	5%	1/10W
R073	1-216-109-00	METAL CHIP	330K	5%	1/10W
R074	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R075	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R076	1-216-039-00	METAL CHIP	390	5%	1/10W
R077	1-216-039-00	METAL CHIP	390	5%	1/10W
R078	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R079	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R080	1-216-033-00	METAL CHIP	220	5%	1/10W
R081	1-249-425-11	CARBON	4.7K	5%	1/4W
R082	1-216-043-00	METAL GLAZE	560	5%	1/10W
R083	1-249-421-11	CARBON	2.2K	5%	1/4W
R084	1-249-417-11	CARBON	1K	5%	1/4W
R085	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R086	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R087	1-216-073-00	METAL CHIP	10K	5%	1/10W
R088	1-249-483-11	CARBON	5.6	5%	1/2W
R089	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R090	1-216-081-00	METAL CHIP	22K	5%	1/10W
R091	1-249-406-11	CARBON	120	5%	1/4W
R092	1-215-881-11	METAL OXIDE	15	5%	2W F
R093	1-249-421-11	CARBON	2.2K	5%	1/4W
R095	1-249-435-11	CARBON	33K	5%	1/4W
R096	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R097	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R099	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R100	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R101	1-249-417-11	CARBON	1K	5%	1/4W
R102	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R103	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R104	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R105	1-216-049-11	METAL GLAZE	1K	5%	1/10W
R106	1-216-045-00	METAL CHIP	680	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R124	1-216-073-00	METAL CHIP	10K	5%	1/10W
R125	1-216-073-00	METAL CHIP	10K	5%	1/10W
R126	1-216-073-00	METAL CHIP	10K	5%	1/10W
R127	1-216-081-00	METAL CHIP	22K	5%	1/10W
R128	1-249-417-11	CARBON	1K	5%	1/4W
R129	1-247-863-00	CARBON	22K	5%	1/4W
R130	1-216-081-00	METAL CHIP	22K	5%	1/10W
R131	1-216-081-00	METAL CHIP	22K	5%	1/10W
R132	1-216-081-00	METAL CHIP	22K	5%	1/10W
R133	1-216-081-00	METAL CHIP	22K	5%	1/10W
R134	1-249-414-11	CARBON	560	5%	1/4W
R140	1-249-440-11	CARBON	82K	5%	1/4W
R141	1-216-041-00	METAL CHIP	470	5%	1/10W
R142	1-216-037-00	METAL CHIP	330	5%	1/10W
R144	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R145	1-216-043-00	METAL GLAZE	560	5%	1/10W
R146	1-216-095-00	METAL CHIP	82K	5%	1/10W
R147	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R148	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R156	1-216-073-00	METAL CHIP	10K	5%	1/10W
R157	1-216-073-00	METAL CHIP	10K	5%	1/10W
R158	1-216-073-00	METAL CHIP	10K	5%	1/10W
R159	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R160	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R162	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R163	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R164	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R165	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R166	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R167	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R168	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R169	1-216-043-00	METAL GLAZE	560	5%	1/10W
R170	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R171	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R172	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R173	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R174	1-216-295-00	CONDUCTOR, CHIP			(2012)
R175	1-216-295-00	CONDUCTOR, CHIP			(2012)
R181	1-216-037-00	METAL CHIP	330	5%	1/10W
R182	1-216-095-00	METAL CHIP	82K	5%	1/10W
R183	1-216-077-00	METAL CHIP	15K	5%	1/10W
R184	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R185	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R186	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R187	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R188	1-216-090-00	METAL CHIP	51K	5%	1/10W
R189	1-216-083-00	METAL CHIP	27K	5%	1/10W
R190	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R191	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R192	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R193	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R194	1-216-099-00	METAL CHIP	120K	5%	1/10W
R195	1-216-101-00	METAL CHIP	150K	5%	1/10W
R197	1-216-083-00	METAL CHIP	27K	5%	1/10W

< VARIABLE RESISTOR >

R151	1-238-601-11	RES, ADJ, CARBON	22K		
R152	1-238-601-11	RES, ADJ, CARBON	22K		
R153	1-238-602-11	RES, ADJ, CARBON	47K		
R154	1-238-602-11	RES, ADJ, CARBON	47K		
R155	1-238-601-11	RES, ADJ, CARBON	22K		

< IC >

U001	1-810-732-11	IC	TC9309F
U002	1-810-733-11	IC	LA6458M
U003	8-759-369-42	IC	HA13153
U005	1-810-734-11	IC	LA1862M
U006	8-759-820-42	IC	LA6458S

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*	1-662-601-11	VOL BOARD			

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< CAPACITOR >

C500	1-136-157-00	FILM	0.022uF	5%	50V
C501	1-136-157-00	FILM	0.022uF	5%	50V
C502	1-130-473-00	MYLAR	0.0015uF	5%	50V
C503	1-130-473-00	MYLAR	0.0015uF	5%	50V
C504	1-136-161-00	FILM	0.047uF	5%	50V
C505	1-136-161-00	FILM	0.047uF	5%	50V

< RESISTOR >

R504	1-249-425-11	CARBON	4.7K	5%	1/4W
R505	1-249-425-11	CARBON	4.7K	5%	1/4W
R506	1-249-426-11	CARBON	5.6K	5%	1/4W
R507	1-249-426-11	CARBON	5.6K	5%	1/4W

< VARIABLE RESISTOR >

R524	1-225-327-11	RES, VAR (WITH CENTER CLICK)	50K		(BAL)
R525	1-225-328-11	RES, VAR	50K		(TONE)
R526	1-223-818-11	RES, VAR (WITH SW)	50K/25K		(VOL/FAD/POWER)

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
8	1-769-452-11	CORD (WITH CONNECTOR) (SP)	
9	1-769-396-21	CORD (WITH CONNECTOR) (POWER)	
10	1-769-453-11	CORD (WITH CONNECTOR) (ANT)	
20	1-769-262-11	CORD (WITH CONNECTOR) 7P	
21	1-769-261-11	CORD (WITH CONNECTOR) 3P	
F1	1-533-330-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
F701	1-532-677-00	FUSE, GLASS TUBE (10A)	
F702	1-532-411-00	FUSE (0.5A)	
HP701	1-543-717-11	HEAD, MAGNETIC (PLAYBACK)	
M701	X-3365-046-1	MOTOR ASSY (REEL/CAPSTAN)	
S701	1-692-502-11	SWITCH, SLIDE (DIRECTION)	
S702	1-692-065-11	SWITCH, LEAF (MUTE)	
S703	1-554-790-21	SWITCH, POWER (TAPE DET)	

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****
HARDWARE LIST
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#1	7-621-770-67	SCREW +PTT 2.6X6 (S)
#2	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT
#3	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
#4	7-621-555-10	SCREW +K 2X3
#5	7-621-255-25	SCREW +PTT 2X4 (S)
#6	7-627-553-88	SCREW, PRECISION +P 2X7
#7	7-624-102-04	STOP RING 1.5, TYPE -E
#8	7-624-104-04	STOP RING 2.0, TYPE -E
#9	7-624-118-01	RING, RETAINING E-2.5
#10	7-627-553-48	SCREW, PRECISION +P 2X4
#11	7-621-255-15	SCREW +P 2X3
#12	7-621-591-00	SCREW +K 2X4
#13	7-623-952-01	WASHER 2.0, FIBER
#14	7-621-559-32	SCREW +K 2.6X5
#15	7-621-773-87	SCREW +PTT 2.6X10 (S)
#16	7-621-775-68	SCREW +PTT 2.6X12 (S)
#17	7-685-133-19	SCREW +P 2.6X6 TYPE2
#18	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#19	7-621-773-86	SCREW +PTT 2.6X4 (S)
#20	7-688-005-01	W 5, SMALL
#21	7-621-770-87	SCREW +B 2.6X5
#22	7-621-775-10	SCREW +B 2.6X4

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-856-560-11	MANUAL, INSTRUCTION (ENGLISH, POLISH, BULGARIAN, HUNGARIAN, RUSSIAN)	
	3-856-561-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, POLISH, BULGARIAN, HUNGARIAN, RUSSIAN)	

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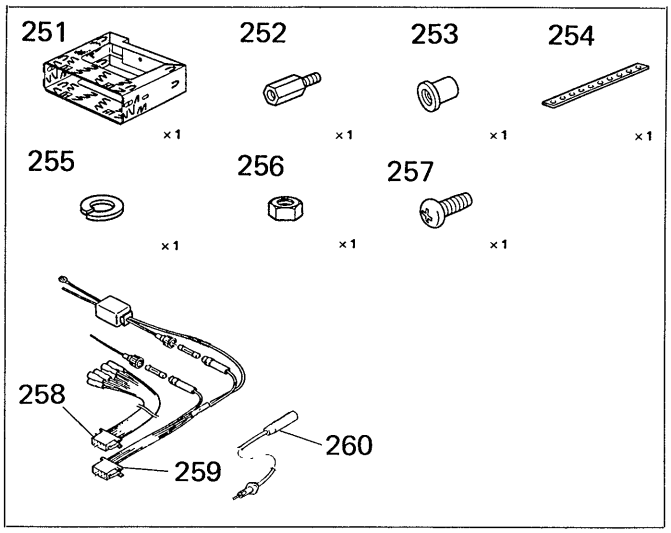
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
251	3-921-173-01	BRACKET	
252	3-919-731-01	BOLT, HEXAGON	
253	3-919-732-01	BUSHING, RUBBER	
254	3-919-733-01	BRACKET	
255	3-919-734-01	WASHER	
256	3-919-941-01	NUT	
257	3-919-735-01	SCREW, +P TAPPING	
258	1-769-452-11	CORD (WITH CONNECTOR) (SP)	
259	1-769-396-21	CORD (WITH CONNECTOR) (POWER)	
260	1-769-453-11	CORD (WITH CONNECTOR) (ANT)	



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